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INDIAN PARENTS AT THEIR CHILDREN'S GRAVE.

THE

FAMILY MAGAZINE,

OR

GENERAL ABSTRACT OF USEFUL KNOWLEDGE.

EMBELLISHED WITH SEVERAL HUNDRED ENGRAVINGS.

UM

VOL. II.

NEW YORK:
PUBLISHED BY REDFIELD & LINDSAY,
No. 13 CHAMBERS-STREET.
1834-5

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PREFACE.

The publication of The Family Magazine was first commenced on Saturday, April 20th, 1833. From that period, through the first volume and up to No. 12 of the second volume, it was published in weekly sheets. The second volume was commenced on the 19th of April 1834, and was issued under the auspices of the former conductor until September 1834, when the editorial department fell into the charge of the present Editor.

The precise period at which the Family Magazine was first originated, seemed to be a new era in periodical literature. It was marked by the adoption of a *plan* for the diffusion of useful knowledge, adapted to the present state of Society, and coequal and coextensive, if possible, with the newly acquired facilities and extraordinary improvements in the mechanick arts. The first operations under the new plan, had their origin in the British "Society for the Diffusion of Useful Knowledge," of which Lord Brougham is chairman. They consisted in the publication of useful works, in a comprehensive form, and at such a cheap rate, as to render them attainable by the poor, while at the same time they were worthy of the rich and the wise. Among others of their first publications was the Penny Magazine, a work that soon gained an unprecedented circulation. Induced by the example of this excellent society, others of a similar character and for similar objects were formed in various parts of the kingdom. Among other works originating with them, were the Saturday Magazine and the Dublin Penny Journal. Multitudes of similar papers afterwards teemed from the British press in every part of the kingdom. The impulse was felt in France, and it immediately gave birth to numerous similar periodicals there, among the most prominent of which are the "Magazin Pittoresque," and "La France Pittoresque," both of which enjoy an enormous patronage. Our own country too, began to feel the necessity of the new facilities. The Family Magazine was originated, and it progressed notwithstanding it was deemed the most extraordinary and presumptuous literary undertaking ever devised in the country. Two small but popular Magazines were also commenced in Boston, and the New York and Philadelphia press were soon teeming with numerous cheap publications under the names of "Libraries," "Galleries," and many other equally comprehensive titles. The poor man was thus furnished with books at a price proportioned to the cost of the farthing light by which he read them. In the zeal of competition, however, many stale and useless works were imprudently admitted into some of the publications, and the smallness of the type and bad quality of the paper, rendered many of them unsatisfactory and almost worthless. Many of the cheap Magazines, also, became satisfied with making up their pages with the fragments of ephemeral news, rather than with substantial Knowledge, alleviating their dulness by introducing here and there a worthless tale, and only taking care to impose the trash upon the world with the catchpenny glare of engravings. The remark however is not general, nor is it made invidiously. But in the belief that more valuable and important information would at least be more beneficial if indeed not more acceptable to the publick taste, and that it could be more easily diffused through a periodical of a style similarly attractive and popular, but under an arrangement differing from those before mentioned, the Family Magazine was continued, with that specifick purpose of remedying *some* of the existing defects, and supplying *some* of the existing wants. But it recommended itself chiefly on the score of the *useful* knowledge it contained, the adoption of Method and System, and its unparalleled cheapness. The plan, we are warranted to say by the issue, has been favourably received, and our periodical has thus progressed to the conclusion of the second volume, which is now presented to the publick. It will, it is trusted, be found to contain much information that will always be valuable, by reason of the intrinsick importance of the subjects treated of, the convenient arrangement under which they are presented, and being accompanied with many engravings which will be useful in facilitating the mind in comprehending them and in forming complete ideas.

New York, April, 1835.

DESCRIPTION OF THE FRONTISPIECE.

Ah, little thought the strong and brave,
  Who bore their lifeless chieftain forth
Or the young wife, that weeping gave
  Her first-born to the earth,
That the pale race, who waste us now,
  Among their bones should guide the plough.

The beautiful original picture that graces this volume as a Frontispiece, was designed and drawn by Weir, and engraved by Mr. Linton Thorn. The suggestion was furnished by the above lines from Bryant's Poem, on "An Indian at the Burying-place of his fathers." The design is no less beautiful than the execution is alike excellent and honourable to the artists.

In order to appreciate fully the lasting interest and beauty of the picture, it is necessary that the mind should recur to those primitive days, when, upon the very ground where we have built our homes, the "red ruler of the shade"

"Walk'd forth, *amid his reign*, to dare
The wolf and grapple with the bear."

The simple Indian is the "forest hero" of this western world, and the white man has but just set his foot upon its unsubdued shores. At an opening in the border of the forest, for

————"they laid their dead
By the vast solemn skirts of the old groves,"

an Indian and his young and tender wife are observed weeping over the grave of their first-born that they have just yielded to the earth.

"A low green hillock, two small gray stones,
Rise over the place that holds its bones."

The swarthy Indian has sat himself down beside a rude rock, and leans upon it, hiding his face in sorrow. Long raven hair veils the face of the young wife, as she droops in the fulness of grief upon her protector's knee. In the rudeness and simplicity of nature, they wear but the wampum blanket to shield their bodies, and the ornamented leathern moccasin to protect their feet. The only guaranty of a livelihood for the morrow, the sorrowing Indian grasps in his right hand, his bow. At their side lies the swathing board, that but recently bore the young innocent, whose lifeless body the 'green hillock' has too prematurely covered. Close at hand sits their faithful companion, the dog, not altogether lacking sympathy, gazing listlessly into the trees. As if to soothe the loneliness of grief, nature has arrested her elements, and a "vast solemn" stillness seems to reign around. While, on one side, the huge trunk of a mighty oak ascends spreading its branches high over the scene, the aspiring saplings upon the other seem striving to reach with their topmost boughs the nethermost limbs of that Father of the forest. The affections of the wife have intertwined themselves with those of her hardy companion and protector, upon whom she reclines with confidence; fit emblem of the tender relation of that gentler portion of the Indian pair, a vine has entwined itself around the oak, and acquiring assurance in the enduring strength of its supporter has extended itself into the branches.

A little beyond the group, a ploughed field extends itself, whence the white man,

————"hewed the dark old woods away,
And gave the virgin fields to the day."

Carrying the view still further in the distance, and over various cultivated fields, undulating, and studded here and there with clumps of trees, the eye meets a beautiful river, which, after threading its way among rocky hills and beetling cliffs, and along overshadowing forests, debouches peacefully into the sea. Its quiet bosom, however, bears a busy squadron of the white man's ships, that have come to burden themselves with the riches of this new treasure land. Full of new zeal, the white man has set his encroaching foot upon the Indian's shore, and elated with his glories and successes, he has reared up a city there, a monument of his bold enterprise, and easily acquired wealth. The landscape lessens among the hills, and the distance is lost among the far-retiring mountains on one side, and the ocean which confuses its bounds with the horizon on the other.

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SECTION I.

TO THE PUBLIC.

In commencing the second volume of THE FAMILY MAGAZINE, a few general remarks by way of introduction may not be misplaced, and may be necessary.

First, then, we would impress on the minds of all concerned, the idea of the *object* of the Magazine, that they may understand what the work is for which they subscribe, and thus be satisfied with it afterwards.

The principal object of the Family Magazine is, to collect, condense, and systematize the great mass of general knowledge contained in myriads of volumes, and lying altogether beyond the reach of the great body of the community; and thus collected, condensed, and systematized, to place it, by its cheapness and comprehensiveness, within the reach of all, thereby diffusing general information universally, and annihilating the monopoly of knowledge by the favoured few who have leisure to devote their days to letters. This being our primary object, it will not be expected of us to fill our paper with original matter. We shall fill it principally with what is already known to the literary — in order to make others literary also. We expect no one, therefore, who understands our object in this respect, to tell us he has seen certain articles before. Nevertheless, we hope to furnish every reader with *something* new, as we shall not entirely overlook originality, and shall likewise endeavour to keep pace with the age in improvement. In a word, it will be our aim, to a certain extent, to bring forth from the treasury of knowledge things both new and old. And we would have it kept constantly in mind, that new subjects will be introduced as fast as old ones can be completed.

Undertaking, as we do, to furnish a *system* of *general* knowledge, we can on no account consent to dispense with any leading branch of it, how little relish soever some may have for particular subjects. Such individuals should recollect the plan on which our paper is established. They should recollect that the particular branches under consideration are indispensable to the system; that they are useful in their place; and that there are others who will duly appreciate them, and who have a right to expect their insertion in a work like ours. They should recollect that our object is utility, and not the gratification of a vitiated taste, which prefers the fugitive amusement of a tale, to sound classic knowledge.

The great advantages of a systematic course, in a work devoted to general knowledge, cannot fail to be realized by every reader, and to be duly appreciated by a discriminating community. In perusing a desultory work, how excellent soever its various articles may be, a thirst for knowledge is excited, without being gratified. The reader, by the scattering fragments served up to him, is made to realize that there is a plenitude in store, which he nevertheless feels at a loss to know how to attain. He perceives that there is a *fund* of knowledge *somewhere*; but he has no conception of its amount, and he feels that he is not in the way to obtain it. Now, the object of this work is to remedy this defect. It is to furnish the reader with a *train* of knowledge; to give those articles *in their place* which are generally scattered at random; and to superadd as much more of the kind as may be necessary to render them complete. It is this principle of *systematizing* which is a leading characteristic of this work, and which we conceive to be a decided improvement on the various periodicals of the kind.

One consideration more, and we will close.

Every country has its peculiarities and localities; and it is therefore impossible in the nature of things, that a periodical adapted to one country can be adapted to another. There are passing localities which a foreign journal cannot notice in season; and there are localities which ought not to be noticed in such a journal at all, but which, notwithstanding, should receive attention in a domestic one. Good, therefore, as a periodical may be at home, it cannot be what is desirable abroad. Indeed, the *better* adapted it is to one country, the *worse* is it fitted to another. No matter how excellent a work may be in itself; it cannot be suited to contrary conditions. An American periodical, detailing our local concerns, and re-publishing from European works what is already common in Europe, would not be remarkably edifying to Europeans; so, on the other hand, a European periodical, imbued with the monarchical spirit, describing its dilapidated old castles and "gorgeous palaces," and extolling its aristocratic and Church and State institutions, however it may suit the taste of those for whom it is designed, can never be very edifying to American Republicans; especially when it is considered, that long before its general circulation among us, whatever it contains that is excellent has perchance been extracted, and given to the American community in their own periodicals. To be plain, we must say that the re-publication of foreign periodicals in this country, augurs ill for our intelligence and enterprise. It is a virtual acknowledgment, that there are not among us the means of furnishing ourselves with common information! Are we then semi-barbarians, thus to need illumination from the scattering rays of intellectual light dispensed from foreign climes? We speak not thus from interested motives. Our own publication is now established on a permanent foundation. It is circulating rapidly and extensively, and can be increased in circulation to any desirable extent. Let us have fifty more *domestic* Magazines, if necessary: so far as we are concerned, we care not *how* many. But never let it be said, to our everlasting disgrace, that to supply ourselves with information on common subjects, we are under the necessity of importing old stereotype plates from beyond the Atlantic, and of re-publishing matter which had been circulated among the peasantry of Europe years before! For the honour of the Republic, we do most fervently hope, that there will be *American* periodicals started in sufficient number to supply our own market. The appearance of every good work of this description, we shall hail with sincere pleasure, as an honour to the literary enterprise of our country.

NATURAL HISTORY.

(Continued from page 411 of Vol. I.)

We have now completed our survey of animals of the cat kind. In all of them, from the lion down to the domestic puss, we find a similarity of temperament and conformation, with the exception of the chetah, which occupies a middle station between the cat and the dog kinds. The animals of this class, as we have seen, are the lion, the puma or cougar, the tiger, the jaguar, the leopard, the panther, the chetah, the lynx, the caracal or siya-gush, the ounce, the ocelot, the serval, the tiger-cat, the margay, the wild-cat, and the domestic cat.

The whole feline race are the natural enemies of man; and they are the only quadrupeds that make good their ground against him, keeping some portions of the earth in their entire possession. Witness the extensive territories in Africa where the wild beasts are so numerous that the natives are deterred from taking up their residence among them; yielding to the dominant lion and leopard large tracts of country that seem adapted to human convenience.

The animals of this class are distinguished by sharp and formidable claws, which they can extend and close at pleasure. They lead a solitary, ravenous life, uniting neither for mutual defence nor support. Except at certain seasons, they are enemies to each other. They subsist entirely on flesh, and would starve on other food. In their natural state, they are rapacious and cruel, and unfit even for the society of one another, much less for human society, like some domestic animals. It is probable, however, that the fiercest of them could be domesticated. Even the lion himself has been yoked to the conqueror's car, and the tiger taught to guard those herds which in his wild state he destroys. But so great is the trouble of domesticating and subsisting them, that notwithstanding they might be rendered thus serviceable, their service would be obtained at too dear a rate, and consequently they are permitted to roam at large in their native wilds and deserts.

While other kinds of animals are classed with no little difficulty, having but few points of resemblance, and different appetites and dispositions, those of the cat kind, though differing in size and colour, have notwithstanding a near resemblance in the leading traits of their character. All are fierce, rapacious, and artful; all are unchanging in their forms, bearing, even in their domesticated state, the marks of their original wildness. The dog and the cow vary according to circumstance and clime; but the lion, the tiger, the leopard, and the panther, are every where essentially the same.

We have now done with this ferocious tribe. As a class, it stands pre-eminently conspicuous in the animal kingdom. At its head is the monarch of the forest, the noble and majestic lion. For this reason, we have given this class the first place, contrary to the usual course pursued in natural history. In our next, we shall introduce to the notice of our readers that huge mass of animated matter, the elephant.

LITERATURE.

(Continued from page 363 of Vol. I.)

LANGUAGE.

Having copied extensively from the writings of others on the interesting and important subject of language, we will now try our own hand at it, that our readers may at least have something *Editorial* in this department—whether very *literary* or *otherwise*, remains to be seen.

It is supposed by some that man has an innate language, as natural to him as are the various sounds produced by the brute and feathered tribes to them. But if this were the fact, it would evidently predominate over artificial language, and the whole earth would have the same dialect. No education, no localities, no circumstances whatever, could eradicate such a language, and substitute another in its place. As soon would the lion's roar or the tiger's yell be changed to the melodious notes of the nightingale.

As a further proof of this position, we have only to consider the case of children. These have no language till they learn it of others; and then it is of that kind which they chance to learn. Were they to learn none at all, they would *have* none at all; as is proved in the case of individuals who have from their infancy been secluded from human society. Peter the Wild Boy, whose biography we gave on page 15 of our 1st. Vol. is a case in point. We have another case in the experiment made by Psamiticus,[*] king of Egypt, and Melabdin Echbar,[†] in the Indies, who, being desirous of ascertaining the innate or natural language, had some infants brought up without being taught to speak, or permitted to hear any human voice. The result was, that they proved to be little more than mere mutes. The sound which after two years experiment these infants were found to utter, viz. *bec*, somewhat resembling the Phrygian word for bread, and which Psamiticus therefore supposed to be of Phrygian origin, was a *mere* sound, void of any signification whatever; such as the dumb, and indeed the veriest infants, sometimes happen to utter.

Man, then, has no inherent language. But he has the capacity of acquiring language from another? The inquiry therefore next arises, How came language *in* the world? How came *the first man* by language? The conclusion is obvious: It must have been communicated to him by his Creator. There was therefore an *original* but not an *innate* language; and this language had a Divine origin.

The next proper inquiry seems to be, What was the nature of this original language? Undoubtedly it was very simple and limited. The longer a language is in use, the more complicated and copious it becomes. Consequently, at its outset it is less so. It has been supposed that language at first had but one part of speech. Without endorsing this opinion, we will give the reasons of its advocates a hearing.

"All that the first men," says Shuckford, "could have occasion to express to one another," must be a few of the names and qualities and actions of the creatures or things about them; and they might probably endeavour to express these by one and the same word. The Hebrew language has but few adjectives; so that it is easy to see how the invention of a few names of things may express things and their qualities. The name *man*, joined with the name of some fierce beast, as *lion-man*, might be the first way of expressing a fierce man. Many instances of the same sort might be named; and it is remarkable that this particular is extremely agreeable to the Hebrew idiom. In the same manner the actions of men or creatures might be described; the adding to a person's name the name of a creature remarkable for some action, might be the first way of expressing a person's doing such an action; our English language will afford one instance, if no more, of this matter. The observing and following of a person wherever he goes is called *dogging*, from some sort of dogs performing that action with great exactness; and therefore Cain Dog Abel may give the reader some idea of the original method of expressing Cain's seeking an opportunity to kill his brother, when the names of persons and things were used to express the actions which were done, without observing any variation of mood and tense or number or person for verbs, or of case for nouns. For all these were improvements of art and study, and not the first essay and original production. Time and observation taught men to distinguish language into nouns and verbs; and afterwards made adjectives and other parts of speech. Time and contrivance gave to nouns their numbers; and in some languages a variety of cases, which varied verbs by mood, tense, number, person, and voice: in a word, which found out proper variation for the words in use, and made men thereby able to express more things by them, and in a better manner, and added to words in use new and different ones, to express new things, as a further acquaintance with the things of the world gave occasion."

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[*] Herod, lib. ii.

[†] Purchas. b. i. c. 8

This theory is indeed plausible and curious; but we incline to the opinion that when God gave to man a language, he gave him a perfect one, containing all the parts of speech and modifications necessary to the clear communication of his ideas. This seems to us more in consonance with the idea of a revealed language; whereas the theory just considered is more in agreement with the idea of a natural or innate language.

We shall pursue this subject in our next, and in many of the succeeding numbers, as we intend to treat it thoroughly ere we leave it.

HISTORY.

(Continued from page 410 of Vol. I.)

The journeying of the descendants of Noah from the East, which has already been noticed, consisted, no doubt, of various migrations, made at different periods, their object being, to find a country that would suit them. Not a few years, therefore, must have elapsed, from the commencement of their peregrinations to the time of their arrival on the plains of Shinar; especially, if, as we have supposed, they made a circuitous route from Armenia, journeying thence by gradual stages to the regions east of Shinar, ere they bent their steps towards that place. This idea of a circuitous route we find confirmed by a striking passage in Berosus already quoted. After having represented Noah and several others as disappearing, he says: "The remainder offered sacrifices to the gods, and, *taking a circuit*, journeyed towards Babylonia." According to the computation of some, they reached that land about eighty years after the Flood, viz. in the year of the world, 1736. Authors differ, however, with regard to this period. Some make it four hundred years after the Deluge. This we conceive to be a great mistake. For the earth was divided in the days of Peleg; and he died but three hundred and forty years after the Flood. Most chronologers concur in the opinion, that it was a hundred and fifty years after that event that the foundation of Babel was laid. This is probably near the truth.

About one hundred and fifty years, then, after the Deluge, it seems the main body of the descendants of Noah, after various migrations from place to place in quest of a country to their liking, chanced, while wending their course westerly, to find a plain in the land of Shinar, where they settled. Their leader appears to have been Nimrod, the grandson of Ham, and the son of Cush. Of him it is said:—"He began to be a mighty one in the earth. He was a mighty hunter before the Lord: wherefore it is said, Even as Nimrod, the mighty hunter before the Lord. And the beginning of his *kingdom* was *Babel*, and Erech, and Accad, and Calneh, in the land of *Shinar*." During the the roamings of mankind through the various regions of the East prior to their settlement in Shinar, they must have been almost continually in the wilderness, the earth being at that period unsettled. Consequently, they must frequently have encountered wild beasts. This afforded a fine opportunity to enterprise and ambition to display their skill and prowess in their destruction. Nimrod, it seems, distinguished himself above all others in this respect; and as a reward for his services, he appears to have been selected as the Chief of that portion of mankind. It does not appear whether Shem, Ham, and Japheth continued with Noah, or accompanied their posterity to Shinar. Egypt is indeed denominated the land of Ham, and Palestine the land of Canaan. But those countries might be named thus, even if neither Ham nor his son ever saw them. It is hardly supposable, that so distinguished men as the three sons of Noah would remain unnoticed, if they had accompanied the emigrants to Shinar. It is true Shem's age, as well as that of Noah, is given; but they do not appear to have figured at all, or to have been otherwise noticed. We conclude, therefore, that they remained with Noah, while the younger and more vigorous portion of mankind journeyed in search of fresh adventures. We see but one objection to this supposition, viz. that the age of one of these individuals is given; from which we should be led to infer that they were not separated from the main body, but continued where their ages could be known and recorded. Yet it should be kept in mind that they lived till after the *Dispersion*, and consequently that the same difficulty would exist in relation to ascertaining their ages, as if they had not come to Shinar at all. In all probability, a communication was kept open between the separated portions of mankind, by which means this and other particulars were made known to one another.

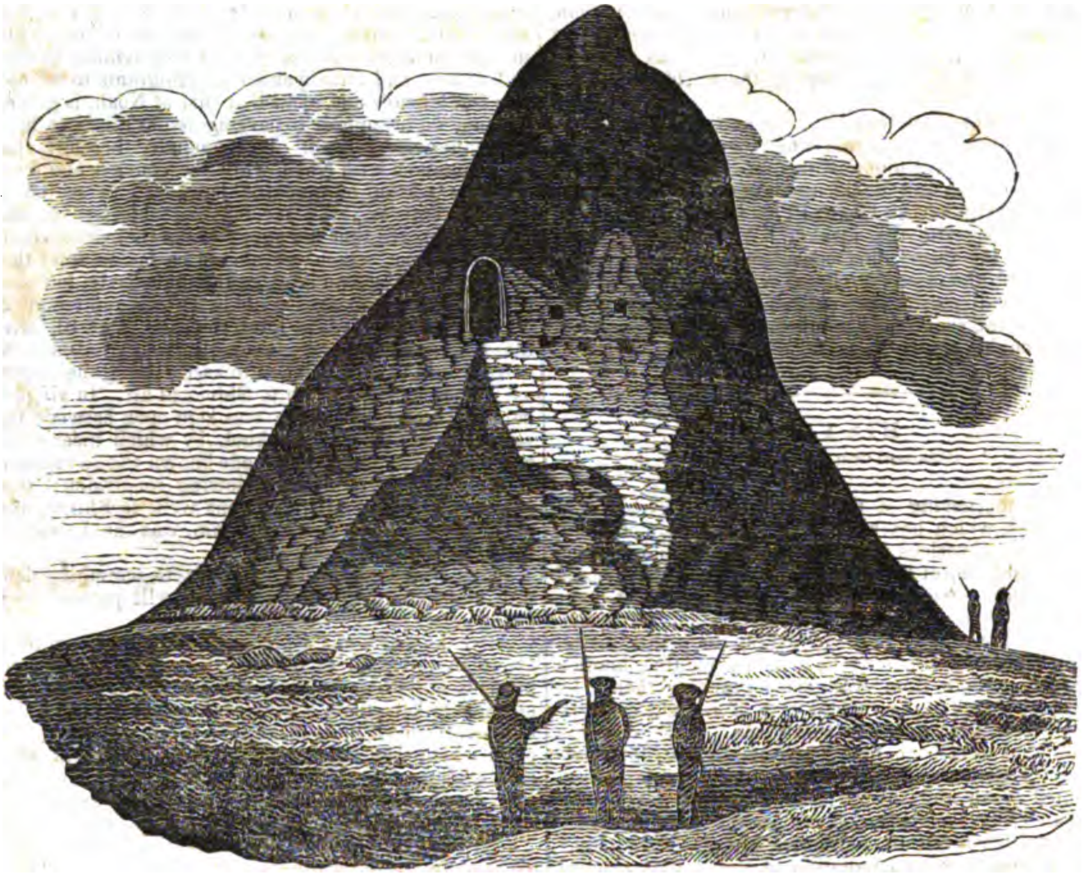
We come, then, to the following conclusion: that neither Noah nor his three sons went to Shinar, and that Nimrod, the grandson of Ham, was the Leader of the party that did go thither.

Having now reduced the subject to something definite, and found a starting point, we will proceed with our history.

After the party above mentioned had taken up their abode in the plain of Shinar, they took it into their heads to build a tower of vast height, to serve as a bond of union to keep them together in one community. So they commenced their operations by making brick, the plain which they inhabited furnishing them with clay in abundance for the purpose, and being at the same time destitute of stone. Several years are supposed to have been spent in preparing materials for building. These being ready, they began to construct their tower, using slime for the want of mortar.

The time occupied in building this tower, and the height to which it was reared, have been variously estimated. Some have supposed the time twenty years, and others even longer. According to the opinion of some, the height attained was a league; and some have supposed it was two leagues. The fact undoubtedly is, that years were employed in its construction, and that it was raised to a great height, though far less than either of the foregoing suppositions would lead us to conclude. This stupendous structure consisted of tower heaped on tower, diminishing in size at every stage of their altitude, with a staircase winding round the exterior, for the conveyance of the building materials upward to the workmen at the top, who were still engaged in raising it higher. While thus engaged in their ambitious project, fancying that they were rendering their names immortal, behold! their language became most strangely confused, insomuch that they could not understand one another. For God had come down and confounded their speech, giving them diverse tongues, whereby the utmost confusion was introduced; and thus were they induced to abandon their undertaking, and were at length scattered abroad over the face of the earth. Hence the abandoned tower obtained the name of Babel, that is, Confusion.

The cut on the next page represents the principal mound of Babylon at the present time. It is reputed to be, and no doubt is, the Tower of Babel—the identical Babel built more than 4000 years ago. It is situated near the Euphrates, fifteen or twenty miles from Bagdad. Its appearance is that of the fallen and decayed pyramid, with the remains of a tower on the summit 50 feet in height, the rubbish whereon it stands being 200 feet high. It seems to have risen in distinct stages or platforms, of which the remains are still visible. The apparent tower which surmounts it is but a remaining part of one of those platforms; and there were undoubtedly several others above it.



THE TOWER OF BABEL.

The following description of the building of Babel and the confusion of tongues is from Josephus.

"Now the sons of Noah were three, Shem, and Japhet, and Ham, born one hundred years before the deluge. These first of all descended from the mountains into the plains, and fixed their habitation there; and persuaded others who were greatly afraid of the lower grounds on account of the flood, and so were very loath to come down from their higher places, to venture to follow their example. Now the plain in which they first dwelt was called *Shinar*. God also commanded them to send colonies abroad, for the thorough peopling of the earth, that they might not raise seditions among themselves, but might cultivate a great part of the earth, and enjoy its fruits after a plentiful manner. But they were so ill-instructed that they did not obey God; for which reason they fell into calamities, and were made sensible by experience of what sin they had been guilty. For when they flourished with a numerous youth, God admonished them again to send out colonies; but they, imagining that the prosperity they enjoyed was not derived from the favour of God, but supposing that their own power was the proper cause of the plentiful condition they were in, did not obey him. Nay, they added to this their disobedience to the Divine will, the suspicion that they were therefore ordered to send out separate colonies, that being divided asunder, they might the more easily be oppressed.

"Now it was Nimrod who excited them to such an affront and contempt of God. He was the grandson of Ham, the son of Noah, a bold man, and of great strength of hand. He persuaded them not to ascribe it to God, as if it was through his means they were happy, but to believe that it was their own courage which procured their happiness. He also gradually changed the government into tyranny, seeing no other way of turning men from the fear of God, but to bring them into a constant dependence on his own power. He also said, "He would be revenged on God, if he should have a mind to drown the world again; for that he would build a tower too high for the waters to be able to reach; and that he would avenge himself on God for destroying their forefathers."

"Now the multitude were very ready to follow the determination of Nimrod, and to esteem it a piece of cowardice to submit to God; and they built a tower, neither sparing any pains, nor being in any degree negligent about the work. And, by reason of the multitude of hands employed in it, it grew very high sooner than any one could expect; but the thickness of it was so great, and it was so strongly built, that thereby its great height seemed, upon the view, to be less than it really was. It was built of burned brick, cemented together with mortar made of *bitumen*, that it might not be liable to admit water. When God saw that they acted so madly, he did not resolve to destroy them utterly, since they were not grown wiser by the destruction of the former sinners, but he caused a tumult among them, by producing in them diverse languages, and causing, that through the multitude of those languages, they should not be able to understand one another. The place wherein they built the tower is now called Babylon, because of the confusion of that language which they readily understood before; for the Hebrews mean by the word Babel, *confusion*."

The following ancient fragment is from the Chaldean historian Berosus.

"They say that the first inhabitants of the earth, glorying in their own strength and size, and despising the gods, undertook to raise a tower whose top should reach the sky, where Babylon now stands: but when it approached the heaven, the winds assisted the gods, and overturned the work upon its contrivers: and its ruins are said to be at Babylon: and the gods introduced a diversity of tongues among men, who till that time had all spoken the same language: and a war arose between Cronus and Titan: but the place in which they built the tower is now called Babylon, on account of the confusion of the tongues; for confusion is by the Hebrews called Babel."—*Euseb. Præp. Evan. lib.* 9.—*Syncel. Chron.* 44.—*Euseb. Chron.* 13.

MYTHOLOGY.

(Continued from page 412 of Vol. I.)

STATUE OF NIOBE.

In our last, we brought the tragedy of Niobe as far down as the death of her children. We will now conclude the story.

When Niobe and her husband were apprised of the havoc made among their children by the arrows of Apollo and Diana, they hastened to their rescue. But an arrow from the unerring bow of Apollo quickly winged its flight to the heart of Amphion. The cup of grief of the widowed, childless Niobe was now filled to overflowing. Disgusted with life, she went forth into the wilderness, there in solitude to pour forth her tears. Her melancholy and deplorable fate excited the compassion of the gods themselves, and determined them to put a period to her woes. On a sudden, the once beauteous but now disconsolate Niobe found herself deprived of the power of motion, and gradually stiffening into stone. And there on Mount Sipylus she stands, a statue of solid marble; still, however, shedding tears, as if conscious of her former grief. Pausanias, a Greek writer of the second century, who was not a little fond of the marvellous, tells us that on this mount he saw the wondrous statue. "When you are near it," says he, "it is nothing but a steep rock, bearing no resemblance at all to a woman, much less to one weeping; but when you are at some distance, you might imagine it to be the figure of a female in distress."

The story of Niobe has been a favourite subject for sculptors; and it is probable there were once several groups representing the mother and her children. One of these groups forms the Frontispiece to our first volume. Pliny speaks of one in a temple of Apollo at Rome in his time.

There is now extant a very large number of short Greek pieces in verse, commonly called epigrams, though not in our sense of the word. Several of these epigrams refer to some figure or figures representing Niobe, or Niobe and her children. One of them, in two lines, runs thus:—

"The Gods turned me while living into stone, but out of stone Praxiteles has restored me to life."

This was undoubtedly intended to express the writer's admiration of some statue of Praxiteles.

There is a longer inscription than the foregoing. It is couched in the following terms.

"Daughter of Tantalus, Niobe, hear my words which are the messengers of wo; listen to the piteous tale of our sorrows. Loose the bindings of thy hair, mother of a race of youths who have fallen beneath the deadly arrows of Phœbus. Thy sons no longer live. But what is this? I see something more. The blood of thy daughters too is streaming around. One lies at her mother's knees; another in her lap; a third on the earth; and one clings to the breast: one gazes stupified at the coming blow, and one crouches down to avoid the arrow, while another still lives. But the mother, whose tongue once knew no restraint, stands like a statue, hardened into stone."

MOUNTAIN SCENE NEAR THE CEDARS OF LEBANON.

Our way up the side of Lebanon was steep, and in many parts difficult; but we were repaid by the delightful freshness of the air as we mounted, and the grandeur of the views on every side.

It was about noon when we reached a small stream flowing down from the mountain, on the banks of which we halted to refresh ourselves, and soon after reached the village of Sibbeehel above it. We saw here some ancient sepulchres in the rocks, and a new church just finished, the inhabitants being all Christians of the Greek communion. There was an appearance of fresher health and vigour in the men than is seen in the plains, and the women were fairer than their lowland neighbours. The former were dressed in the usual costume of the peasantry of the country; but the latter wore a horn of metal, differing in shape and position from any that I had yet seen. It was placed on the crown of the head pointing rather backward, like a small diadem; and being flat at the top, and larger there than at the bottom, it looked exactly like one of the small boiling kettles of the country reversed. There is a fine spring, in an arched well, just over Sibbeehel, over which is a cross, and at which we drank. The population of the place might amount to 200 persons; and the state of their grounds spoke favourably of their industry.

In about an hour from hence we passed under another Christian village on the summit of a high hill on our left. This was called Aytou, and though small, had several large and well-built dwellings in it. The road became here so fatiguing to our horses, as to require occasional halts. It was in many places dangerous too, as it presented only a bed of smooth stones, on which the foot could take no hold. The layers of rock having exactly the same form as the surface of the soil and shape of the mountain, presented in masses a steep smooth side, over which it was necessary to lead our animals, and to use great caution ourselves. This same cause renders many parts of the road along the coast disagreeable.

It was fully another hour before we reached the summit of the mountain, this part of which is called Jebel Arrneto. The whole body of this is white limestone rock of different qualities, and here the stone has streaks, or layers of red, as if coloured by the oxide of iron, or some other metal. There was, at this moment, snow still remaining here, though the heat of the sun was nearly equal to that of an English summer. Flocks of large white long-haired goats were browsing on the rocks, under the care of boys and their faithful dogs; and pines and young cedars of a smaller size were abundant. The view from hence, on looking westward, commands an unbounded horizon at sea, with the whole of the coast from Ras-el-Shukkah to the extreme northern point of land seen from Tarabolus. The port and island of that town bore from us about N. by W. ½ W. perhaps fifteen miles; but the town itself was not visible, from the intervention of the hill which overhangs it. The whole of the plain below, with the deep valleys which intersect it, looked beautiful from hence, presenting corn lands of the freshest green, bare patches of ploughed land, showing a deep red soil, and olive trees, and streams of water in abundance. The bluff point of Ras-el-Shukkah, which had been called, according to Strabo, the Face of God, from an idea of its being the end of Lebanon, looked from hence quite insignificant, from being so much lower than our own level; and the white hills and valleys, over which we had crossed with much fatigue, now looked like the little eminences raised by ants, and resembled very much the white hills on the banks of the Jordan, as seen in that valley from the Mount of Olives near Jerusalem. We descended over the eastern side of this Jebel Arrneto, and opened a narrow but exceedingly deep valley, called Wadi Khezheyap. The descent down the perpendicular cliffs of the eastern part of this hill was by winding steps, cut originally in the rock in some places, and formed by stones and earth in others, over which it was necessary to lead our horses with great caution. The valley was watered by a fine stream, running through it, and presented on all sides marks of the most active industry.—*Buckingham's Travels among the Arab Tribes.*

THE NORTH CAPE.

This Cape forms the most northerly point of the continent of Europe, and may be regarded as one of the sublimest wonders of nature. It is situated within the arctic circle, in seventy-one degrees ten minutes north latitude. It has been accurately described by a late voyager, from whose account the following particulars are extracted.

In approaching the Cape, a little before midnight, its rocks at first appeared to be nearly of an equal height, until they terminated in a perpendicular peak; but, on a nearer view, those within were found to be much higher than those of the extreme peak or point. Their general appearance was highly picturesque. The sea, breaking against this immovable rampart, which had withstood its fury from the remotest ages, bellowed, and formed a thick border of white froth. This spectacle, equally beautiful and terrific, was illuminated by the MIDNIGHT SUN; and the shade which covered the western side of the rocks rendered their aspect still more tremendous. The height of these rocks could not be ascertained; but here every thing was on so grand a scale, that a point of comparison could not be afforded by any ordinary known objects.

On landing, the party discovered a grotto, formed of rocks, the surface of which had been washed smooth by the waves, and having within a spring of fresh water. The only accessible spot in the vicinity was a hill, some hundred paces in circumference, surrounded by enormous crags.—From the summit of this hill, turning towards the sea, they perceived to the right a prodigious mountain, attached to the Cape, and rearing its steril mass to the skies. To the left, a neck of land, covered with less elevated rocks, against which the surge dashed with violence, closed the bay, and admitted but a limited view of the ocean. To see as far as possible into the interior, our navigators climbed almost to the summit of the mountain, where a most singular landscape presented itself to the view. A lake in the foreground had an elevation of at least ninety feet above the level of the sea; and on the top of an adjacent, but less lofty mountain, was another lake. The view was terminated by peaked rocks, chequered by patches of snow.

At midnight the sun still remained several degrees above the horizon, and continued to ascend higher and higher till noon, when having again descended, it passed the north, without dipping below the horizon. This phenomenon, which is as extraordinary to the inhabitants of the torrid and temperate zones, as snow is to the inhabitants of the torrid zone, could not be viewed without a particular interest. Two months of continued day-light, during which space the sun never sets, seem to place the traveller in a new state of existence; while the effect on the inhabitants of these regions is singular. During the time the sun is perpetually above the horizon, they rise at ten in the morning, dine at five or six in the evening, and go to bed at one. But, during the winter season, when, from the beginning of December until the end of January, the sun never rises, they sleep above half of the twenty-four hours, and employ the other half in sitting over the fire, all business being at an end, and a constant darkness prevailing.

The cause of this phenomenon, as it affects the northern and southern regions of the earth, may be readily understood. The sun always illumines half the earth at once, and shines on every side ninety degrees from the place where he is vertical. When he is vertical over the equator, or equidistant from both poles, he shines as far as each pole; and this happens in spring and autumn. But, as he declines to the north in summer, he shines beyond the north pole, and all the countries near that pole turn round in perpetual sunshine: he, at the same time, leaves the south pole an equal number of degrees, and those parts turn round in darkness. The effect is contrary at each pole, in our winter the sun declining south of the equator.

About three miles from the North Cape lies Maso, the northernmost part of Norwegian Lapland. It is formed of a very fine bay, in which ships may winter with the greatest security.—*Monthly Repository.*

BIOGRAPHY.

(Continued from page 382 of Vol. I.)

“ The venerable BENEDICT JOSEPH LABRE, who died in the odour of sanctity, on the 16th of April 1783.”

If such a creature as the *venerable* B. J. Labre can be called a man, he was one of the dirtiest that ever “died in the odour of sanctity;” and yet, for the edification of the English, his life is translated from the French “by the Rev. M. James Barnard, ex-president of the English college at Lisbon, and Vicar General of the London district.”

From this volume it appears that Labre was born at Boulogne on the 26th of March, 1748. When a child, he would not play as other children did, but made little oratories, and “chastised his body.” Having thus early put forth “ buds of self-denial, and self-contempt,” he was taught Latin, educated superior to his station, did penance, made his first general confession, and found his chief delight at the feet of altars. At sixteen years old, instead of eating his food, he gave it away out of the window, read pious books as he walked, turned the house of his uncle, a priest, into a kind of monastery, observed religious poverty, monkish silence, and austere penance, and, by way of humility, performed abject offices for the people of the parish, fetched provender for their animals, took care of their cattle, and cleaned the stalls. The aversion which he had against the world induced him to enter into a convent of Carthusians; where he discovered that he disliked profound retirement, and imagined he should not be able to save his soul unless he embraced an order more austere. Upon this he returned home, added extraordinary mortifications to his fasts and prayers, instead of sleeping on his bed lay on the floor, and told his mother he wished to go and live upon roots as the anchorets did. All this he might have done in the Carthusian convent, but his brain seems to have been a little cracked, for he resolved to go into another Carthusian convent, the prior of which would not admit him till he had studied philosophy for a year, and learned the Gregorian chant. Church music was very agreeable to him—but it was not so with regard to *logic*. "Notwithstanding all his efforts, he was never able to conquer his repugnance to this branch of study;" yet he somehow or other scrambled through an examination; got admitted into the convent; "thought its rules far too mild for such a sinner as he looked upon himself to be;" and after a six weeks trial, left in search of admission into the order of La Trappe, as the most rigid of any that he knew. The Trappists would not have him. This refusal he looked upon as a heavenly favour, because the monastery of Sept-Fonts surpassed La Trappe in severe austerities and discipline; and there he became a "novice" till this life he fancied did not agree with him. "Having a long time before quitted his father's house, he could not think of returning to it again;" and at two and twenty years of age he knew not what to do. His biographer says, that "little fit for the cloister, and still less fit for the world, he was destitute of the means of getting a livelihood; and being now persuaded of what were the designs of God concerning him, he resolved to follow the conduct, the light, and inspirations of the Holy Spirit, and to submit himself to all the sufferings and afflictions which might await him." His first step to this was writing a farewell letter to his parents, on the 31st of August, 1779, "and from that time they never received any account of him till after his death."

(To be concluded in our next.)

THE DEVIL'S BLOOD.

The Rev. Mr. Hecwelder relates the following fact of the influence of RUM upon an Indian.

An Indian who had been born and brought up at Minnisink, near the Delaware Water Gap, told me, near fifty years ago, that he had once, under the influence of strong liquor, killed the best Indian friend he had, fancying him to be his worst avowed enemy.

He said that the deception was complete, and that while intoxicated, the face of his friend presented to his eyes all the features of the man with whom he was in a state of hostility.

It is impossible to express the horror with which he was struck when he awoke from that delusion; he was so shocked, that he from that moment resolved never more to taste of the maddening poison, of which he was convinced the Devil was the inventor; for it could only be the Evil Spirit who made him see his enemy when his friend was before him, and produced so strong a delusion on his bewildered senses.

From that time until his death, which happened thirty years afterwards, he never drank a drop of ardent spirits, which he always called "THE DEVIL'S BLOOD," and was firmly persuaded that the Devil, or some of the infernal spirits, had a hand in preparing it.—*Pioneer*.

POETRY.

THE HERMIT.—By Beattie.

At the close of the day, when the hamlet is still,
And mortals the sweets of forgetfulness prove;
When naught but the torrent is heard on the hill,
And naught but the Nightingale's song in the grove:
'Twas thus by the cave of a mountain afar,
While his harp rung symphonious, a hermit began;
No more with himself or with nature at war,
He thought as a sage, though he felt as a man.

"Ah! why all abandon'd to darkness and wo;
Why, lone Philomela, that languishing fall?
For spring shall return, and a lover bestow,
And sorrow no longer thy bosom inthral.
But if pity inspire thee, renew the sad lay:
Mourn, sweetest complainer, man calls thee to mourn,
O sooth him whose pleasures like thine pass away,
Full quickly they pass—but they never return.

Now gliding remote, on the verge of the sky,
The moon half extinguish'd her crescent displays:
But lately I mark'd when majestick on high
She shone, and the planets were lost in the blaze.
Roll on, thou fair orb, and with gladness pursue
The path that conducts thee to splendour again;
But man's faded glory what change shall renew?
Ah fool! to exult in a glory so vain.

'Tis night, and the landscape is lovely no more;
I mourn; but ye woodlands, I mourn not for you;
For morn is approaching, your charms to restore,
Perfum'd with fresh fragrance, and glitt'ring with dew.
Nor yet for the ravage of winter I mourn;
Kind nature the embryo blossom will save:
But when shall spring visit the mouldering urn!
O when shall day dawn on the night of the grave!

'Twas thus by the glare of false science betray'd,
That leads to bewilder, and dazzles to blind;
My thoughts wont to roam from shade onward to shade,
Destruction before me and sorrow behind.
O pity, great Father of light, then I cried,
Thy creature who fain would not wander from thee!
Lo, humbled in dust, I relinquish my pride;
From doubt and from darkness thou only canst free.

And darkness and doubt are now flying away;
No longer I roam in conjecture forlorn:
So breaks on the traveller, faint and astray,
The bright and the balmy effulgence of morn.
See, truth, love, and mercy in triumph descending,
And nature all glowing in Eden's first bloom!
On the cold cheek of death smiles and roses are blending,
And beauty immortal awakes from the tomb.

OUR FIRST VOLUME.

It will be perceived that various subjects are continued from our first volume. Such is the character of this publication, and the nature of those subjects, that this measure is unavoidable. We cannot, for example, treat fully on Universal History in a small weekly periodical, in less time than several years. And there are various other subjects which require more than a year for this purpose. It will therefore be readily perceived, that it is necessary for those who would have the whole of certain subjects, to take the work from its commencement. It should be recollected that it is not like purchasing a lot of old newspapers, to buy the 1st. Vol of this paper. We treat principally on standard subjects of knowledge; and, to such as have not already perused that volume, it would be as new and as valuable as the current one. As we stereotype our work, we can furnish it to new subscribers to any extent. The price unbound is the same as the present, viz. $1,50; well-bound and lettered, $2.

APE.

The highest order of the class *Simia*, or of four-handed animals, having a separate thumb on each, capable of being opposed to the other fingers. Their hands, &c. nearly resemble those of men; they are destitute of tails, walk upright, are mild and gentle, imitate human actions more closely, and are susceptible of greater attainments, than any others of the same tribe.

SECTION II.

HISTORY.

The following additional heathen testimony to the fact of the building of Babel and the Dispersion, is given by Josephus.

"The Sibyl also makes mention of this tower, and of the confusion of the language when she says thus: 'When all men were of one language, some of them built a high tower, as if they would thereby ascend up to heaven, but the gods sent storms of wind and overthrew the tower, and gave every one his peculiar language; and for this reason it was that the city was called *Babylon.*' But as to the plain of Shinar, in the country of Babylonia, Hestiæus mentions it, when he says thus: 'Such of the priests as were saved took the sacred vessels of Jupiter Enyalius, and came to Shinar of Babylonia.'"

The same events are evidently alluded to by Homer, Virgil, Horace, Ovid, and Lucian, under the allegory of the attempt of the Giants to scale heaven. Abydenus and Eupolemus likewise mention the same. That it was constructed of burnt bricks and bitumen, is attested by Justin, Quintus Curtius, Vitruvius, and other heathen writers, and by modern travellers who have visited the ruins. And the numerous languages in the world, unaccountable on any natural principle, are so many existing evidences of the confusion of tongues in the miraculous manner already described.

How strikingly do all the foregoing accounts, traditions, and circumstances, coincide in proof of the great historical truth, that mankind, not long after the Deluge, erected a stupendous tower to gratify their pride and ambition, and were forced to abandon the work before its completion, in consequence of the miraculous confusion of their language. To those who object to the reality of the occurrence of these events, we have only to say:—What further proof could there be than has been adduced? What ancient historical fact can be proved, if these evidences are insufficient to prove the one under consideration? And how can these various coincidences be accounted for, excepting by the admission of the fact? We say in this instance as we did in that of the Deluge: that it requires far greater credulity to believe, under all the circumstances of the case, that such events did not take place, than to believe that they actually did occur.

We have already remarked, that after the Confusion of Tongues, mankind were scattered abroad over the face of the earth. The Jewish historian Moses speaking of this event says:—"So the Lord scattered them abroad from thence upon the face of all the earth; and they left off to build the city. Unto Eber were born two sons; the name of the one was Peleg, for in his days was the earth divided; and his brother's name was Joktan." Josephus another Jewish historian, having described the confusion of Tongues, says:—"After this they were dispersed abroad, on account of their languages, and went out by colonies every where; and each colony took possession of that land which they lighted upon, and unto which God led them, so that the whole continent was filled with them, both the island and maritime countries. There were some also who passed over the sea in ships, and inhabited the islands; and some of those nations do still retain the denominations which were given them by their first founders; but some have lost them also, and some have only admitted certain changes in them, that they might be the more intelligible to the inhabitants. And they were the Greeks who became the authors of such mutations; for when in after ages they grew potent, they claimed to themselves the glory of antiquity; giving names to the nations that sounded well, [in Greek,] that they might be better understood among themselves; and setting agreeable forms of government over them, as if they were a people derived from themselves."

Our history is now brought down to the termination of the second great period in the annals of mankind. Before proceeding further, therefore, we will insert our biographical notices belonging to this period.

DISTINGUISHED CHARACTERS WHO LIVED DURING THIS PERIOD.

Noah, as we have already stated, was both an Antediluvian and a Postdiluvian character. But his biography properly belongs to the latter period, as his career did not terminate till long after the Deluge. This renowned individual was the second great Parent of the human race. He was the ninth in descent from Adam, being the son of Lamech, the son of Methuselah, the son of Enoch, the son of Jared, the son of Mahalaleel, the son of Cainan, the son of Enos, the son of Seth, the son of Adam. He was therefore one of the patriarchal line from Adam. He was distinguished for his piety amid the universal moral corruption abounding in his time; was "a preacher of righteousness" to a perverse generation; and was the honoured instrument selected by God for the preservation of mankind from utter destruction. He was the connecting link between the Antediluvian and Postdiluvian worlds. Being warned by God of the destruction impending o'er the heads of the Antediluvians, he prepared an ark, which he seems to have been a hundred years in constructing, and took into it his family and some of the various kinds of beasts, and fowls, and creeping things. This being done, the Deluge came, destroying all without the ark, and bearing aloft that vessel and its inmates in safety. Noah was six hundred years old when this event transpired. For more than a year he continued in the ark; but the Flood having at length subsided, he went out of it, and, as an expression of his gratitude, built an altar and offered a sacrifice of beasts and fowls to his merciful Preserver; whereupon God made a covenant with him that there should not be another such Deluge, and made the rainbow the sign of that covenant. Of Noah it was said by Lamech his father, in the spirit of prophecy, "This same shall comfort us concerning our work, and toil of our hands, because of the ground which the Lord hath cursed." Some, taking it for granted that animal food was not permitted till after the Flood, have supposed that the *comforting* here mentioned consisted in the grant made to Noah to use animal food. But on examining the subject, we find a far more probable solution of the passage in the promise of God to Noah after the offering of his sacrifice, as follows:—"The Lord smelled a sweet savour; and the Lord said in his heart, I will not again *curse the ground* any more for man's sake;——neither will I again smite any more every living thing as I have done. While the earth remaineth, seed-time and harvest, and cold and heat, and summer and winter, and day and night, shall not cease."—After this, Noah planted a vineyard, on the fruit of which he became inebriated. Ham, his youngest son, observing him in this condition, exposed him to his brethren, who, taking a garment, went backwards, and covered their father. When Noah awoke from his wine, and learned what his sons had done to him, he denounced a curse against the posterity of Canaan, the son of Ham, and pronounced a blessing on Shem and Japheth. All that we can positively learn of Noah after this is, that he lived till he was 950 years of age. The probability is, as we have heretofore stated, that he finally settled in some part of China, and founded that empire.

Japheth was the eldest son of Noah. He was born about a hundred years before the Flood. His sons were Gomer, Magog, Madal, Javan, Tubal, Meshech, and Tiras. The blessing pronounced upon him for his act of filial respect above noticed, was as follows:—"God shall enlarge Japheth, and he shall dwell in the tents of Shem, and Canaan shall be his servant." Japheth's age and place of residence are not given. There is reason, however, to suppose, that he continued with his father.

Shem was the second son of Noah. He was born about ninety-eight years before the Flood. In him was the patriarchal line continued. The blessing pronounced upon him ran thus:—"Blessed be the Lord God of Shem; and Canaan shall be his servant." The children of Shem were Elam, Asshur, Arphaxad, Lud, and Aram. He probably continued with his father. He attained the age of 600 years, and was the only son of Noah whose age is given.

Ham was the third son of Noah, born probably about ninety-six years before the Flood. His sons were these: Cush, Misraim, Phut, and Canaan. He was cursed by his father for his exposure of him when inebriated, and doomed to be a servant of servants. How long he lived, and where he lived, we are not informed. He probably remained in the neighbourhood of his father.

Nimrod, the grandson of Ham, and the son of Cush, was the most conspicuous character, Noah excepted, that figured during this period. He appears to have excelled all others in hunting. He was also the founder of the Chaldean empire. He is the first monarch mentioned in all history. "And the beginning of his kingdom was Babel, and Erech, and Accad, and Calneh, in the land of Shinar." On what authority he is said to have waged war on his species, we have yet to learn.

VIEW OF THE SUPPOSED SITE OF BABYLON.

Now that we are on the subject of Nimrod's government, it might not be untimely to give a description of the situation and appearance of that spot so celebrated in the annals of the world where he began his reign. The cut above, with the following description, is from the Monthly Repository.

"Babylon is described by Herodotus as enclosing within its walls, a space of fifteen square miles. The walls he states were eighty-seven feet thick, and three hundred and fifty feet high. Sir Robert Ker Porter, to whom we are indebted for the annexed view of the supposed site of this famous city, and of the river Euphrates, thinks that Babylon was so far from being exactly divided by the river, that its greatest extent lay to the west. He says, from the situation of Birs Nimrood, on the western plain, and the chain of building-remains intersected by patches of verdure, which connect the bank of the river from beyond Anana with that extraordinary pile, the sketch of the city that way seems fully equal to the prescribed bounds; and wherever the old Tower of Babel could be traced, there we should doubtless look for the most ancient portion of the city: that which had comprised the capital until Nebuchadnezzar, despising the palace of his ancestors, and 'the boundaries of their habitations,' erected a vaster and more magnificent structure on the opposite bank of the river, and spread the walls of the city yet further towards the rising sun. The eastern bank, certainly, has preserved more remains than the west, but if the Kasr, or palace, &c. are really the ruins of the new palace and its citadel, then we have the natural solution; wherever the court was, there would the population draw, till the opposite side were comparatively deserted. The aggrandizement of the temple of Belus in that quarter, by the same monarch, who had given a rival to its ancient palace, would in some measure act as a counterpoise. But when Cyrus, for his own immediate object, so effectually stopped the course of the river, the consequences of the haste with which it was done are said to have broken down certain defensive dykes to the west of the city, and hence those parts ever afterwards became a marsh. No person can doubt, that all who could, would withdraw from such unwholesome quarters; and when the temple was sacked by Xerxes, then we may suppose that the inhabitants would emigrate to the other shore."

LITERATURE.

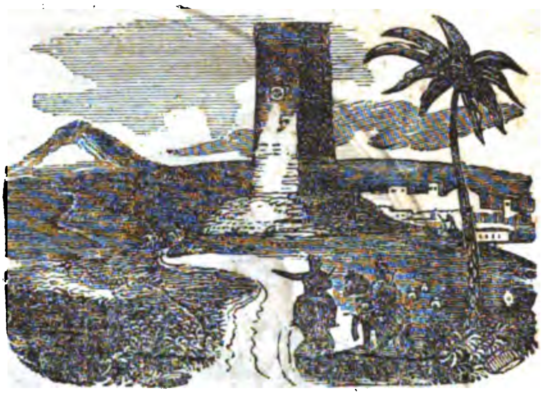
LANGUAGE.

Our next subject of inquiry will be, Which was the original language? To this we readily reply: No one as it now is. Too many changes have occurred in every language to permit us to expect to find any one now like that one. And yet it is but rational to conclude, that the original language was not destroyed at Babel, but that a portion of mankind retained it as one of the many kinds spoken after the Confusion. The portion of mankind which did retain this language were undoubtedly those who remained in Chaldea This is a more natural supposition, than that those whose language was changed remained there. We come therefore to the conclusion, that the primitive Chaldean language was the original one.

Now it will be recollected that Abraham was a native of Ur of the Chaldees. From him descended the Jews or Hebrews. Thus we perceive at once that the ancient Hebrew and Chaldean languages were from the same source. And if Noah was not present at the Dispersion, as has been supposed, but was at that time dwelling in China with a portion of his posterity, then of course his party also retained the original language. Thus we arrive at the conclusion, that the ancient Chinese, Chaldean, and Hebrew languages were all substantially the same, and may all be considered as the primitive language. This deduction, drawn from the circumstances of the case, is confirmed by those languages themselves.

"I am inclined to think," says Shuckford, "that if any one would take the pains to examine strictly the Chaldean and Hebrew languages, and take from each what may reasonably be supposed to have been improvements made since their original; he will find the Chaldean and Hebrew tongue to have been at first the very same. There are evidently, even still, in the Chaldean Tongue, great numbers of words the same with the Hebrew; perhaps as many as mankind had for their use before the confusion of Babel; and there are many words in these two tongues which are very different, but their import or signification is very often such as may occasion us to conjecture that they were invented at or since that confusion. The first words of mankind were, doubtless, as I have before said, the names of the common things and creatures, and of their most obvious qualities and actions, which men could not live without observing, nor converse without speaking of. As they grew more acquainted with the world, more knowledge was acquired, and more words became necessary. It would be to little purpose to consider at large the dispute for the priority of the Hebrew or Chaldean tongue. We may take either, and endeavour to strip it of all its improvements, and see whether in its infant state it has any real marks of an original language. I shall choose the Hebrew, and leave the learned reader to consider how far what I offer may be equally true of the Chaldean tongue.

"And if we consider the Hebrew tongue in this view, we must not take it as Moses wrote it, much less with the improvements or additions it may have since received; but we must strip it of every thing which looks like an addition of art, and reduce it, as far as may be, to a true original simplicity. And 1, all its vowels and punctuations, which could never be imagined until it came to be written, and which are in no wise necessary in writing it, are too modern to be mentioned. 2. All the prefixed and affixed letters were added in time, to express persons in a better manner than could be done without them. 3. The various voices, moods, tenses, numbers, and persons of verbs, were not original, but invented as men found occasion, for a greater clearness and copiousness of expression. 4. In the same manner the few adjectives they have, and the numbers and regimen of nouns, were not from the beginning. By these means we may reduce the whole language to the single theme of the verbs, and to the nouns or names of things and men; and of these I would observe, 1, That the Hebrew nouns are commonly derived from the verbs; and this is agreeable to the account which Moses gives of the first inventing of the names of things. When Cain was to be named, his mother observed, that she had got a man from the LORD, and therefore called him Cain, from the verb which signifies *to get*. So when Seth was to be named, she considered that God had appointed her another, and called his name Seth, from the verb which signifies *to appoint*. When Noah was to be named, his father foresaw that he would comfort them, and so named him Noah, from the verb which signifies *to comfort*. And probably this was the manner in which Adam named the creatures: he observed and considered some particular action in each of them, fixed a name for that action, and from that named the creature according to it. 2. All the verbs of the Hebrew tongue, at least all that originally belonged to it, consist uniformly of three letters, and were perhaps at first pronounced as monosyllables; for it may be the vowels were afterwards invented, which dissolved some of the words into more syllables than one. I am the more inclined to think this possible, because in many instances the same letter dissolves a word, or keeps it a monosyllable, according as the vowel differs, which is put to it. *Aven* is of two syllables; *Aour* and *Aouth* are words of one: and many Hebrew words now pronounced with two vowels, might originally have had but one: *Barak, to bless*, might at first be read *Brak*, with many other words of the same sort. There are indeed several words in this language which are not so easily reducible to monosyllables; but these seem to have been compounded of two words put together, as shall be observed hereafter. 3. Many of the nouns which are derived from the verbs, consist of the very same letters with the verbs themselves; probably all the nouns did so at first, and the difference there now is in some of them is owing to improvements made in the language. If we look into the Hebrew tongue in this manner, we shall reduce it to a very great simplicity; we shall bring it to a few names of things, men, and actions; we shall make all its words monosyllables, and give it the true marks of an original language. And if we consider how few the radical words are, (about five hundred,) such a paucity is another argument in its favour."



RUINS OF MOAB.

We obtained, says Buckingham, a distant view of Oom-el-Russas, about eight or ten miles off, to the southward of us. The only conspicuous object which presented itself to our view, at this distance, was a high tower, looking like a monumental column, standing alone. We continued our way towards it in nearly a straight line, over a gently rising ground, with an improving soil, and reached it about noon.

On entering the site of this ruined town, we came first to some smoothly hewn cisterns in the rocks, with marks of a large quarry, from which abundance of stone had been taken away for building. Beyond these, and on a higher level, we found a portion of a square building, resembling the remains of a small fort, the walls of which were pierced with long and narrow loop-holes for arrows or musketry. A few paces south of this stood the tower which had shown itself so conspicuously at a distance. This tower was not more than ten feet square at its base, and from thirty to forty feet high; the masonry in it not being remarkable either for its strength or elegance. On the shaft of this square pillar, for so it might well be called, was a sort of square capital, cut off from the body of the tower by a shelving moulding raised at the corners like the covers of the Roman Sarcophagi, scattered so abundantly over the country. At each corner of this square capital was a plain Doric column, of small size, supporting a florid cornice, sculptured with an arabesque pattern, and curved outwards at the corners in the most fanciful manner.

On the north, the east, and the west sides of this tower, and about midway between its base and summit, a Greek cross was sculptured in relief, and contained within a circle: but on the south side this emblem was not to be found. In various parts of it were many marks like those on the wells and cisterns of El Themed; and as this tower is unquestionably of a date much posterior to the days of the Israelites sojourning in these parts, and of Greek or Roman work in the decline of these empires, the marks are most probably those of the Arabs. The inquiry suggested would still be useful, however, inasmuch as if the characters on the Written Mountain were found generally resembling these, it might be concluded that they also were the work of Arabs, and not of the Jews during their wandering in the Desert of Sin.

To the eastward of this tower, a few paces only, are remains of ruined buildings, and to the southward are seen foundations, with broken pottery, and other vestiges of former population, extending for more than half a mile to the first division of enclosed dwellings belonging to the town. This is about 200 yards square, the walls are low, but are constructed of large stones, and the interior of this space is filled with ruined buildings, the arch doorways of which are the only parts remaining perfect. These arches are all of the Roman shape; and I observed amongst the ruins, in several places, appearances of stone beams having been laid on the walls, so as to reach from side to side, and support entirely the roof of the dwelling.

MYTHOLOGY.

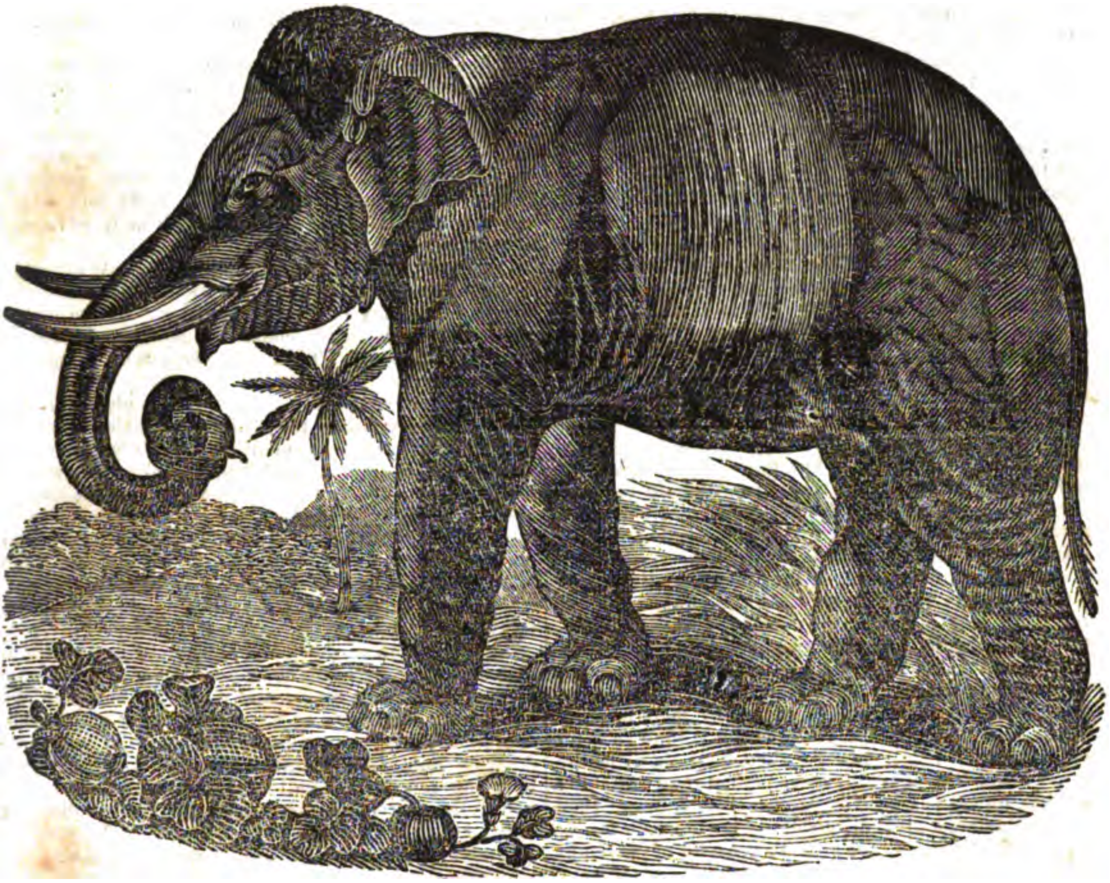
PHAETON PRECIPITATED FROM THE CHARIOT OF SOL.

Sol, or the sun, is stated by some mythologists to be the same as Apollo. This however is not the general opinion. Sol was the son of Hyperion; though some authors suppose Sol and Hyperion the same. Lucian makes Sol one of the Titans. He is usually represented like a young man with a radiated head, his pallium thrown over his left arm.

Sol had four horses, to wheel his flaming car through the vaulted skies. Fulgentius says, the names of these horses are, Erythreus or the Red, Actæon or the Bright, Lampos the Resplendent, and Philogœus the Lover of the Earth. The first name, Erythreus, is taken from the rising of the sun, when his rays are of a ruddy colour. It is for this reason that Homer calls Aurora rosy-fingered. The second of Sol's horses, Actæon, has his name from the brightness of the sun after he has made considerable progress in his career for the day. The third, Lampos, is so called from the splendour of the noon-day sun. The fourth, Philogœus, takes his name from the setting sun, when he seems to incline to the earth. Ovid, however, gives them different names, calling them Pyroeis, Eous, Æthon, and Phlegon. In the cut above, but two of these horses appear—the other two perchance had taken fright, and run away. This cut we will now proceed to explain.

Sol had a son by Clymene named Phaeton. Phaeton having received some affront from Epaphas, a son of Jupiter, tending to his disparagement, determined to demonstrate to the whole world the nobleness of his birth. To accomplish this object, he repaired to his father, and obtained from him an oath that he would grant him whatsoever he might ask. He then requested the privilege of driving his father's horses one day. Startled at the mad proposal, and yet being bound by his oath, Sol remonstrated with him on the impropriety of such an intention, setting before him in the clearest light the hazardous nature of the undertaking. But Phaeton was not to be shaken in his purpose. He insisted on the fulfilment of his father's promise, who consequently was bound to comply. Phaeton exulting at the glorious prospect before him, mounted the dread chariot, and set forward. But being frightened at the sight of the sign Scorpio, he turned the coursers from their wonted path; which they perceiving took fright, and dashed about at random, Phaeton being unable to control those fiery steeds which none but the experienced hand of his father could guide. And now they were rapidly approaching the earth, and by their approximation had already set it on fire. Jupiter from his Empyrean height beheld the scene, and, to prevent a universal conflagration, launched forth a mighty thunderbolt, and precipitated Phaeton headlong to the earth. The sisters of Phaeton, Lampethusa, Lampetia, and Phæthusa, (called the Heliades,) incessantly deplored his fate, and were at length transformed into poplars weeping amber instead of tears.

NATURAL HISTORY.



THE ELEPHANT.

"The human race excepted, the Elephant is the most respectable of animals. In size he surpasses all other terrestrial creatures, and in understanding he is inferior only to man. Of all the brute creation, the elephant, the dog, the ape, the beaver, are all most admirable for their sagacity; but the genius of the dog is only borrowed, being instructed by man in almost every thing he knows; the monkey has only the appearance of wisdom; and the beaver is only sensible with regard to himself, and those of his species. The Elephant is superior to them all three; he unites all their most eminent qualities. The hand is the principal organ of the monkey's dexterity; the Elephant with his trunk, which serves him instead of arms and hands, with which he can lift up and seize the smallest as well as the largest objects, carry them to his mouth, place them on his back, hold them, or throw them far off, has the same dexterity as the monkey, and at the same time the tractableness of the dog; he is like him susceptible of gratitude, capable of strong attachment; he uses himself to man without reluctance, and submits to him, not so much by force, as by good treatment; he serves him with zeal, intelligence, and fidelity; in fine, the elephant, like the beaver, loves the society of his equals, and makes them understand him. They are often seen to assemble together, disperse, act in concert, and if they do not erect buildings, and do not work in common, it is perhaps for want of room only, and tranquillity; for men have very anciently multiplied in all the regions inhabited by the elephant; he consequently lives in fear and anxiety, and is nowhere a peaceful possessor of a space large and secure enough to establish his habitation on a settled spot. Every being in nature has his real price, and relative value; to judge of both in the elephant, we must allow him at least the judgment of the beaver, the dexterity of the monkey, the sentiment of the dog, and, to add to these qualifications, the peculiar advantages of strength, size, and longevity. We must not forget his arms, or his defence, with which he can pierce through and conquer the lion. We must observe, that he shakes the ground at every step; that with his trunk he roots up trees; that with the strength of his body he makes a breach in a wall; that being terrible by his force, he is invincible by the resistance only of his enormous mass, and by the thickness of the leather which covers it;

that he can carry on his back a tower armed in war, with a number of men; that he alone moves machines, and carries burthens which six horses cannot move. To this prodigious strength he joins courage, prudence coolness, and exact obedience: he preserves moderation even in his most violent passion; he is more constant than impetuous in love; in anger he does not forget his friends; he never attacks any but those who have given him offence; he remembers favours as long as injuries: having no taste for flesh, and feeding chiefly upon vegetables, he is not naturally an enemy to other animals; he is beloved by them all, since all of them respect him, and have no cause to fear him. For these reasons, men have had at all times a veneration for this great, this first of animals. The ancients considered the Elephant as a prodigy, a miracle of nature; they have much exaggerated his natural faculties; they attribute to him, without hesitation, not only intellectual qualities, but moral virtues.

"In a wild state, the Elephant is neither bloody nor ferocious; his manners are social; he seldom wanders alone; he commonly walks in company, the oldest leads the herd, the next in age drives them, and forms the rear; the young and the weak are in the middle. The females carry their young, and hold them close with their trunks. They only observe this order, however, in perilous marches, when they go to feed on cultivated lands; they walk or travel with less precaution in forests and solitary places, but still keeping at such a moderate distance from each other as to be able to give mutual assistance and seasonable warnings of danger. Some, however, straggle, and remain behind the others; none but these are attacked by hunters, for a small army would be requisite to assail the whole herd, and they could not conquer without a great loss of men; it is even dangerous to do them the least injury; they go straight to the offender, and, notwithstanding the weight of their body, they walk so fast as that they easily overtake the lightest man in running; they pierce him through with their tusks, throw him against a stone, and tread him under their feet; but it is only when they have been provoked, that they become so furious and implacable. It is said, that when they have been once attacked by men, or have fallen into a snare, they never forget it, and seek for revenge on all occasions. As they have an exquisite sense of smelling, perhaps more perfect than any other animal, owing to the large extent of their nose, they smell a man at a great distance, and could easily follow him by the track. These animals are fond of the banks of rivers, deep valleys, shady places, and marshy grounds; they cannot subsist a long while without water, and they make it thick and muddy before they drink; they often fill their trunks with it, either to convey it to their mouth, or to cool their nose, and to amuse themselves in sprinkling it around them; they cannot support cold, and suffer equally from excessive heat, for, to avoid the burning rays of the sun, they penetrate into the thickest forests. They also bathe often in the water; the enormous size of their body is rather an advantage to them in swimming, and they do not swim so deep in the water as other animals; besides, the length of their trunk, which they erect, and through which they breathe, takes from them all fear of being drowned.

"Their common food is roots, herbs, leaves, and young branches; they also eat fruit and corn, but they have a dislike to flesh and fish. When one of them finds abundant pasture, he calls the others, and invites them to come and feed with him. As they want a great quantity of fodder, they often change their place, and when they find cultivated lands, they make a prodigious waste; their bodies being of an enormous weight, they destroy ten times more with their feet than they consume for their food, which may be reckoned at the rate of one hundred and fifty pounds of grass daily. As they never feed but in great numbers, they waste a large territory in about an hour's time; for this reason the Indians and the Negroes take great pains to prevent their visits, and to drive them away, by making a great noise, and great fires; notwithstanding these precautions, however, the elephants often take possession of them, drive away the cattle and men, and sometimes pull down their cottages. It is difficult to frighten them, as they are little susceptible of fear; nothing can stop them but fireworks, and crackers thrown amongst them, the sudden effect of which, often repeated, forces them sometimes to turn back. It is very difficult to part them, for they commonly attack their enemies all together, proceed unconcerned, or turn back.

"The female Elephant goes two years with young; when she is in that condition the male never conjoins with her. They only bring forth a young one, which has teeth as soon as brought forth; he is then larger than a boar; yet his tusks are not visible, they appear soon after, and at six months old are some inches in length; at that age, the Elephant is larger than an ox, and the tusks continue to increase till he is advanced in years.

"It is very easy to tame the Elephant. As he is the strongest and most rational of animals, he is more serviceable than any of them; but he was formerly supposed to feel his servile condition, and never to couple in a domestic state. This, however, has been found to be an erroneous opinion.

"There is, therefore, no domestic Elephant but has been wild before; and the manner of taking, taming, and bringing them into submission, deserves particular attention. In the middle of forests, and in the vicinity of the places which they frequent, a large space is chosen, and encircled with palisadoes; the strongest trees of the forest serve instead of stakes, to which cross pieces of timber are fastened, which support the other stakes; a man may easily pass through this palisado; there is another great opening, through which the Elephant may go in, with a trap hanging over it, or a gate, which is shut behind him: to bring him to that enclosure, he must be enticed by a tame female ready to take the male; and when her leader thinks she is near enough to be heard, he obliges her to indicate by her cries the condition she is in; the wild male answers immediately, and begins his march to join her; she repeats her call now and then, and arrives first to the first enclosure, where the male, following her track, enters through the same gate. As soon as he perceives himself shut up, his ardour vanishes, and when he discovers the hunters, he becomes furious; they throw at him ropes with a running knot to stop him; they fetter his legs and his trunk; they bring two tame Elephants, led by dexterous men, and try to tie them with the wild Elephant; and at last, by dint of dexterity, strength, terror, and caresses, they succeed in taming him in a few days.

(To be continued.)

BIOGRAPHY.

THE "VENERABLE" BENEDICT JOSEPH LABRE.

(Concluded.)

His next steps were pilgrimages. First he went to Loretto, "from tender devotion to the Blessed Virgin, whom he looked on as his mother;" next to Assisium, the birth-place of St. Francis, where he, according to custom, got a small blessed cord, which he constantly wore; then he went to Rome, where he sojourned for eight or nine months, and wept "in the presence of the tomb of the holy apostles;" afterwards he visited the tomb of St. Romuald at Fabrieno, where the inhabitants immediately began to look upon him as a saint; from thence he returned to Loretto; he then journeyed to Naples, and had the pleasure of seeing the blood of St. Januarius, which would not liquify when the French entered Naples, till the French General threatened the priests who performed the miracle that the city would suffer, if the saint remained obstinate; and in short, says the Rev. Vicar General of the London district, "there was hardly any famous place of devotion in Europe which was not visited by this servant of God." To follow Labre's other goings to and fro would be tedious: suffice it to say that at one of his Loretto trips some people offered him an abode, in order to save him the trouble of going every night to a barn at a great distance; but as they had prepared a room for him with a bed in it, he thought this lodging was too sumptuous; and he therefore retired into a hole cut out of the rock under the street. Labre at last favoured the city of Rome by his fixed residence, and sanctified the Amphitheatre of Flavian by making his home in a hole of the ancient ruins.

In this hole of sufficient depth to hold and shelter him in a tolerable degree from the weather, he deposited himself every night for several years. He employed the whole of every day, sometimes in one church, and sometimes in another, praying most commonly upon his knees, and at other times standing, and always keeping his body as still as if he were a statue. Labre's daily exercise in fasting and lifelessness reduced him to so helpless a state, that a beggar had compassion on him, and gave him a recommendation to a hospital, where, "by taking medicines proper for his disorder, and more substantial food, he soon grew well;" but relapsing into his "constant, uniform, and hidden life," he became worse. This opportunity of exhibiting Labre's virtues is not neglected by Labre's biographer, who minutely informs us of several particulars. 1st. He was so careful to observe the law of silence, that in the course of a whole month, scarcely any one could hear him speak so much as a few words. 2dly. He lived in the midst of Rome as if he had lived in the midst of a desert. 3dly. He led a life of the greatest self-denial, destitute of every thing, disengaged from every earthly affection, unnoticed by all mankind, desiring no other riches than poverty, no other pleasures than mortification, no other distinction than that of being the object of universal contempt. 4thly. He indulged in rigorous poverty, exposed to the vicissitudes and inclemencies of the weather, without shelter against the cold of winter or the heat of summer, wearing old clothes, or rather rags, eating very coarse food, and for three years living in the "hole in the wall." 5thly. To his privations of all wordly goods, he joined an almost continual abstinence, frequent fasts, nightly vigils, lively and insupportable pains from particular mortifications, and two painful tumours which covered both his knees, from resting the whole weight of his body on them when he prayed. 6thly. "He looked upon himself as one of the greatest of sinners;" and this was the reason why "he chose to lead a life of reproach and contempt;" why he herded "among the multitude of poor beggars;" "why he chose to cover himself with rags and tatters instead of garments; why he chose to place a barrier of disgust between himself and mankind;" "why he abandoned himself to the bites of disagreeable insects;" and why he coveted to be covered with filthy blotches.

Labre's biographer, who was also his confessor, says that his "appearance was disagreeable and forbidding, his legs were half naked, his clothes were tied round the waist with an old cord, his head was uncombed, he was badly clothed and wrapped up in an old and ragged coat, and in his outward appearance he seemed to be the most miserable beggar that I had ever seen." His biographer further says, "I never heard his confession but in a confessional, on purpose that there might be some kind of separation betwixt us." The holy father's lively reason for this precaution, any history of insects with the word "pediculus" will describe accurately.

Thus Labre lived and died; and here it might be supposed would end his memoirs. But no. In whatever odour he lived, as he "died in the odour of sanctity," an enthusiasm seized some persons to touch Labre dead, who, when living, was touchless. Labre being deceased, was competent to work miracles; accordingly he stretched out his left hand, and laid hold on the board of one of the benches. On Easter-day, being a holiday, he worked more miracles, and wonders more wonderful than ever were wondered at in our days, as may be seen at large in the aforesaid volume, entitled—"The life of the venerable Benedict Joseph Labre, who died at Rome, in the odour of sanctity."

London Every Day Book.

LEGENDS.

The monks of the dark ages imagined a saint to be holy in proportion to his filthiness. They said St. Ignatius delighted to appear abroad in dirty old shoes—that he never used a comb, but let his hair get matted, and religiously abstained from paring his nails. One saint attained to such piety as to have nearly three hundred patches on his inexpressibles, which after his death were hung up in public as an incentive to emulation. St. Francis discovered by certain experience that the devils were frightened away by such kind of economy, and that clean clothing animated them to tempt and seduce the wearers; and one of their heroes declares that the purest souls are in the dirtiest bodies.

In the life of St. Francis we find, among other grotesque miracles, that he preached a sermon in a desert, where he collected an immense audience, as the birds shrilly warbled at every sentence; and when he left off, they dispersed into four companies, to report his sermon to all the birds in the universe. He grew so intimate with a nightingale, that when a nest of swallows began to babble, he hushed them by desiring them not to tittle-tattle of their sister the nightingale: attacked by a wolf, he, with only the sign manual of the cross, held a long dialogue with his rabid assailant, till the wolf, meek as a lap-dog, putting his paws into the hands of the saint, followed him through the town, and became half a Christian. This same St. Francis had such a detestation of the good things of this world, that he would never suffer his followers to touch money. St. Philip Nereius, too, was such a lover of poverty, that he frequently prayed that God would bring him to such a state as to stand in need of a penny, and find nobody that would give him one.

Of the fables of this period, the legend of St. Nicholas and the naked boys in the tub is a characteristic specimen. The fame of Nicholas's virtues was so great, that an Asiatic gentleman, on sending his two sons to Athens for education, ordered them to call on the bishop for his benediction, but it being late in the day when they arrived at Mira, they thought proper to defer their visit till the morrow. They accordingly took lodgings at an inn, where the host, in order to secure their baggage and effects to himself, murdered them in their sleep, and having cut them in pieces, he salted them and put them in a pickle tub with some pork, meaning to sell them as such. The bishop, however, having had a vision of this impious transaction, immediately resorted to the inn, and calling the landlord to him, reproached him for his horrid villany, when the man, perceiving that he was discovered, confessed his crime, and entreated the Bishop to intercede with the Almighty for his pardon; upon which the Bishop did beseech Almighty God not only to pardon the murderer, but also for the glory of his name to restore life to the poor innocents who had been so inhumanly put to death. The saint had hardly finished his prayer, when the mangled and detached pieces were by divine power reunited, and the youths perceiving they were alive again, threw themselves at the feet of the holy man to embrace and to kiss him: but the Bishop, not suffering their humiliation, raised them up, and exhorted them to return thanks to God alone for this mark of his mercy; then advising them as to their future conduct, he sent them to prosecute their studies at Athens.

In another of the miraculous legends of ecclesiastical history, it is said, that when the Emperor Decius persecuted the Christians, seven noble youths of Ephesus having concealed themselves in a spacious cavern, the tyrant doomed them to perish there, giving orders that the entrance should be firmly secured with a pile of stones, but that they immediately fell into a deep slumber, which was miraculously prolonged without injuring the powers of life during a period of one hundred and eighty-seven years. At the end of this time the slaves of Adolius, to whom the inheritance of the place had descended, removed the stones to supply materials for some rustic edifice, and the light of the sun darting into the cavern, the sleepers awoke after, as they thought, a slumber of a few hours. They felt pressed by the calls of hunger, and resolved that Iamblichus, one of their number, should secretly return to the city and purchase bread for the use of his companions. The youth, if we may still employ that appellation, could no longer recognise the once familiar prospect of his native country, and his surprise was increased by the appearance of a large cross triumphantly erected over the principal gate of Ephesus, while his singular dress and obsolete language confounded the baker, to whom he offered an ancient medal of Decius as the current coin of the empire: when Iamblichus, on the suspicion of possessing a secret treasure, was dragged before the Judge, and then mutual inquiries produced the amazing discovery that two centuries were almost elapsed since Iamblichus and his friends had escaped from the rage of a Pagan tyrant. The Bishop of Ephesus, the clergy, the magistrates, the people, and, it is said, the Emperor Theodosius himself, hastened to visit the cavern of the seven sleepers, who bestowed their benediction, related their story, and at the same instant peaceably expired. "This singular tale," Mr. Gibbon adds, "Mahomet learned when he drove his camels to the fairs of Syria, and he has introduced it as a divine revelation into the Koran. The same story has been adopted and adorned by all the nations, from Bengal to Africa, who profess the Mahometan religion.—*London Mirror*.

POETRY.

WHO IS MY NEIGHBOUR?—ANONYMOUS.

THY neighbour? It is he whom thou
Hast power to aid and bless,
Whose aching heart or burning brow
Thy soothing hand may press.

Thy neighbour? 'Tis the fainting poor,
Whose eye with want is dim,
Whose hunger sends from door to door,—
Go thou, and succour him.

Thy neighbour? 'Tis that weary man,
Whose years are at their brim,
Bent low with sickness, cares, and pain:—
Go thou, and comfort him.

Thy neighbour? 'Tis the heart bereft
Of every earthly gem;
Widow and orphan, helpless left:—
Go thou, and shelter them.

Thy neighbour? Yonder toiling slave,
Fettered in thought and limb,
Whose hopes are all beyond the grave,
Go thou, and ransom him.

Whene'er thou meet'st a human form
Less favoured than thine own,
Remember 'tis thy neighbour worm,
Thy brother, or thy son.

Oh, pass not, pass not heedless by;
Perhaps thou canst redeem
The breaking heart from misery:—
Go, share thy lot with him.

ITEMS OF INTELLIGENCE.

Several of the Chinese provinces have been severely scourged by immense swarms of locusts. The Vice Roy immediately on their approach, issued a proclamation against them expressed in very strong terms! But these are not the only misfortunes the Chinese have been recently doomed to encounter. Canton and its environs had suffered from inundations. We perceive that the desolation was general not only through that but the adjoining provinces of Quangsi and Keangsi. The maritime city of Chieuchow situated on the north eastern verge of the province of Canton at the foot of a range of hills, was all but swept away by the sudden burst of water through a ravine; at least 18,000 houses were, it is stated in the official paper, destroyed, and many people drowned; more damage was, it is believed, suffered there, than even in Canton city.

Extract of a letter, dated Serampore, Nov. 26th, 1833, received per ship Star arrived from the E. Indies, and communicated to the editor of the U. S. Gazette:—"Most awful earthquakes have been experienced in the Upper Provinces, and we have had three or four shocks down here. They were particularly severe at Napol and Monghyr. At the former place it is supposed that about *ten thousand natives' houses have been levelled to the ground.*"

A ship lately sailed from London for India with several missionaries on board, and five hundred newly manufactured idols or false gods for sale.

It is a curious fact, that notwithstanding difference of temperament and disease, by which the two sexes are distinguished, the number of deaths and births in each, is almost exactly the same.—Thus, at London, during the past year: christened males, 13,553; females, 13,537; buried, males 13,319; females, 13,258.

The Bishop of London is the head of the British and Foreign Temperance Society.

Lewis Cass, Secretary of War; *Levi Woodbury*, Secretary of the Navy; and *Benjamin F. Butler*, attorney General of the United States,—are all decided Temperance men.

THE CANADIAN GIANT, well known as having exhibited himself in several countries of Europe and America, died at St. Jean des Chaillons, about thirty miles below Quebec, on the 28th ult. after an illness of near two months. His name was Modeste Malhiot, and he was a native of that or the adjoining parish. His height was six feet four inches, and his weight 619 ½ lbs. The coffin in which he was interred was three feet wide, and two feet and a half deep.

NEW-YORK MORAL LYCEUM.

A Society has been recently formed in this city under the title above, the object of which is, to discuss the great moral subjects which at present agitate the community, such as Temperance, Slavery, War, &c. together with such other moral subjects as the Society may deem advisable. Its meetings for discussion are public, and are holden one evening in a week. The Society is composed of individuals of different views on the various subjects enumerated, and each party is entitled to an equal portion of time in discussion. The following is the Preamble to its Constitution.

PREAMBLE.

Whereas, discussion is the most thorough mode of investigation, inasmuch as it necessitates the contending parties to exert themselves in the most strenuous manner in defence of their respective sentiments, and in opposition to those of their opponents, thereby eliciting all possible arguments, evidences, and objections, and presenting a full view of a subject; and whereas, there are some peculiar advantages in oral discussion, in that, by bringing the parties face to face, by rendering them personally acquainted, and by affording immediate opportunity for explanation, and for correction of misapprehension, it tends to preserve due courtesy, to smooth the asperity of controversy, to remove prejudice, and to prevent perversion, censoriousness, and recrimination:—We the undersigned, feeling a deep interest in the propagation of correct moral sentiment in the community, do hereby form ourselves into a Society under the following Constitution.

One of the articles of the Constitution provides, that no specific number of Members be necessary to constitute a quorum; and another specifies, that a majority shall always have the privilege of altering or amending the Constitution.

SECTION III.

HISTORY.

Mankind having been scattered abroad by the confusion of tongues, settled in various regions of the earth. The descendants of each of the sons of Noah, notwithstanding the confusion of language, preserved their genealogies, and kept separate in accordance with them. The descendants of Japheth appear to have settled various countries, as follows: Gomer, Tubal, Togarmah, Magog, and Meshech, settled in and near the north parts of Syria; Ashkanez near Armenia; Tarshish in Cilicia. Kittim was the father of the Macedonians. Elishah appears to have settled the Cyclades, and Javan Greece. Madai was evidently the father of the Medes; Tiras of the Thracians. Riphath settled near the borders of Paphlagonia, and Dodanim is thought to have planted Rhodes. The descendants of Shem settled various parts of the interior of Asia. Elam settled Persia. Arphaxad resided at Ur of the Chaldees. Jocktan, the great grandson of Arphaxad, had thirteen sons, who with their families occupied the country from Mesha to Sephar, a mount of the east. One branch of the family of Arphaxad continued at Ur for several generations. Lud is supposed to have been the father of the Lydians, and Aram settled in some part of Syria. Asshur, one of the sons of Shem, built Nineveh, and the city Rehoboth, and Calah, and Resen between Nineveh and Calah. This city of Resen, we are informed, was a great city. As to the posterity of Ham, they settled Palestine and Egypt. They appear likewise to have retained possession of the portion of Chaldea which was inhabited before the Confusion and Dispersion. But to be more particular. The children of Cush, the first son of Ham, spread in process of time into several parts of Arabia, over the borders of the land of Moab, into Arabia Felix, up to Midian and Egypt; all of which countries collectively are sometimes called the land of Cush. Mizraim, the second son of Ham, peopled Egypt with a part of his descendants, and was king of that country. Ludim and Lehabim, two of Mizraim's sons, peopled Lybia. Casluhim, another of his sons, established himself at Cashiotis, in the entrance of Egypt from Palestine. Philistim, one of Casluhim's sons, planted the country of the Philistines, between the border of Canaan and the Mediterranean. Phut, the third son of Ham, probably settled somewhere in Arabia, near to Cush, as he is mentioned in conjunction with the latter by the prophet Jeremiah. The sons of Canaan, the fourth son of Ham, peopled the land of Canaan. Sidon settled in Phœnicia, one of whose chief towns was called by his name. Arvad was neighbour to Sidon. Heth lived near Gerar, towards Egypt. Speaking of the Canaanites collectively, Moses says: "The border of the Canaanites was from Sidon, as thou comest to Gerar, unto Gaza*; as thou goest unto Sodom and Gomorrah, and Admah and Zeboim, even unto Lasha."

It is observable, that the names of the individuals composing the more immediate descendants of Noah, are the names borne by the nations they founded, or the countries they settled. For example, Palestine was denominated the land of Canaan, after Canaan the son of Ham, whose posterity settled that land. Egypt was denominated the land of Ham, after Ham himself, some of whose descendants settled that country. The names of Canaan's sons also are particularly worthy of note. "Canaan begat Sidon his first-born, and Heth, and the Jebusite, and the Amorite, and the Girgasite, and the Hivite," &c. All these are names borne by different nations of Canaan. And so of the other names. Gog, the king of Magog, is called the chief prince of Meshech and Tubal. Now Magog, Meshech, and Tubal were sons of Japheth. Lucian says that the city of Hierapolis, which is the present Aleppo, was anciently called by another name; and Pliny tells us what that name was: "The Syrians," says he, "called it Magog." Tarshish, Kittim, and Elishah were likewise sons of Japheth; and we hear of places called Tarshish and Kittim, and of the isles of Elishah. The Persians were denominated Elamites after Elam, a son of Shem. Assyria derives its name from Asshur, another son of Shem, who founded Nineveh, the capital of that empire.

These examples suffice. We perceive by them that the very countries of the East are so many testimonies to the reality of the history of the early period of the world which we are now considering. The names of the immediate descendants of Noah are inscribed on the broad tablet of states and empires—on the wide wastes of the East, and the adamantine crags of the eternal hills. Nor till those states and empires shall cease to be remembered; till history shall no longer recount her story; till time itself shall be no more; will those names be erased. The records of those times need no monument of marble, no parchment scroll, to preserve their remembrance; for Shinar's Plain and Babel's Ruins, the land of Canaan and the land of Ham, still have locality and a *name;* Euphrates rolls her waters still, and Ararat rears on high its venerable summit:—all speaking in language more impressive than pen can inscribe or than tongue can utter, that the account handed down to us of the origin of nations is authentic.

We have at length traced our history down to the period when we can no longer view mankind as one great community, but when we must consider each nation by itself. And in thus tracing history from the beginning, we have in our progress *descended* to the origin of nations, instead of *ascending* to that point. We have found, in the regular train of grave historical detail, whence sprang the various nations of antiquity; the Chinese, the Chaldeans, the Assyrians, the Persians, the Canaanites, and the Egyptians, together with all the tribes of earth which figured in ancient story. We stand at last at the disparting of that great stream which has hitherto flowed on unbroken, but which now divides into numerous rivulets, each one destined in its turn to become a mighty torrent, rolling on in its course for a season, to be finally disembogued in the oblivious ocean of time. These rivulets, these torrents, we will follow in their various meanderings, and note their rugged banks and flowery meads, their broad expansions and their thundering cataracts. We flatter ourselves that in our various expeditions, scenes of the most thrilling interest will be continually opening before us. Nor will they be the illusive scenes of some fairy land. Our readers may be well assured that we are now in possession of the substance, and not grasping at the shadow, of ancient days. And we take occasion here to remark, that it is to the Bible itself that we are more indebted for the history of the world thus far, than to all other writings combined. Moses is the only individual who has handed down for the benefit of all succeeding ages any thing deserving the name of universal history, from the period of the world's creation to that of the division of the earth among mankind, and the settlement of the nations. To Moses alone is it owing, that the history of the first two thousand years of our world—a period amounting to more than one third of the whole time that the earth has existed—is not involved in impenetrable obscurity. Other writers there were, but none who even pretended to give a *universal* history. Sanchoniathon, Berosus, Manetho, and others wrote; but they merely undertook, each one, to give an account of his own countrymen. And even their accounts are so beclouded in fable, that were it not that the bright beams of Mosaic history break through the cloud, and exhibit a clearer view, we should be at a loss indeed to know what to understand in relation to them.

LITERATURE.

LANGUAGE.

Attempts have been made to account for the variety of languages in the world on natural principles. Difference of climate, intercourse with different nations, and the fondness of men for variety and change, are the principal causes assigned by those who take this ground.

Now it must be admitted, that difference of climate will cause some change in language in respect to pronunciation. It will abound in aspirates, labials, dentals, or other particular sounds, according to climate. Intercourse with different nations, also, introduces variety into language; but at the same time it tends rather to *assimilate* the languages of different nations to one another, than to *widen the difference*. With regard to a love of novelty and change, this is no doubt a cause of some alteration, especially when we consider the various circumstances which combine to render new words necessary.

"These are the general reasons of the mutability of language; and it is apparently true, that some or other of these have, ever since the confusion of Babel, kept the languages of the world in a continual variation. The Jews mixing with the Babylonians, when they were carried into captivity, quickly altered and corrupted their language, by introducing many Syracisms and Chaldaisms into it. And afterwards, when they became subject to the Greeks and Romans, their language became not only altered, but as it were lost, as any one will allow, who considers how vastly the Hebrew differs from the rabbinical diction, and the language of the Talmuds. The Greek tongue in time suffered the same fate; and part of it may be ascribed to the Turks overrunning their country, and part of it to the translation of the Roman empire to Constantinople. But some part of the change came from themselves; for, as Breerwood has observed, they had changed many of their ancient words long before the Turks broke in upon them; of which he gives several instances out of the books of Cedrenus, Nicetas, and other Greek writers.

"The numerous changes which the Latin tongue has undergone, may all be accounted for by the same reasons. They had in a series of years so diversified their language, that the Salian verses composed by Numa were scarcely understood by the priests in Quintilian's time; and there were but few antiquaries within about three hundred and fifty years who could read and give the sense of the articles of the treaty between Rome and Carthage, made a little after the expulsion of the kings. The laws of the twelve tables, collected by Fulvius Ursinus, and published in the words of the kings and decemviri who made them, are a specimen of the very great alteration which time introduced into the Latin tongue. Nay, the pillar in the capital, erected in honour of Drusillus, about one hundred and fifty years before Cicero, shows, that even so small a space of time as a century and a half caused great variations. After the Roman tongue attained the height of its purity, it quickly declined again, and became corrupted; partly from the number of servants kept at Rome, who could not be supposed to speak accurately and with judgment; and partly from the great concourse of strangers, who came from the remote provinces, so that the purity of it was in a great degree worn off and gone, before the barbarisms of the Goths quite extinguished it.

"And what thus happened in the learned languages is equally observable in all other languages of the world: time and age vary every tongue on earth. Our English, the German, French, or any other, differs so much in three or four hundred years, that we find it difficult to understand the language of our forefathers; and our posterity will think ours as obsolete as we do the speech of those who lived ages ago. And all these alterations of the tongues may, I think, be sufficiently accounted for by some or other of the causes before assigned; but none of them shows how or by what means the confusion at Babel could be occasioned. Our builders had travelled from their ancestors many hundred miles, from Ararat to Shinar; the climates may differ, and suppose we should imagine the country to affect the pronunciation of the children born in it, yet still it will be hard to say that this should cause confusion; for since they were all born in or near the same place, they would be all equally affected, and speak all alike. Besides, a difference of pronunciation causes difficulties only where persons come to converse after living a distance from one another. An imperfection in our children's speech, bred up under our wing, would be observed from its beginning, grow familiar to us as they grew up, and the confusion occasioned by it would be very little. And as to any commerce with other nations, they had none; they were neither conquered nor mingled with foreigners; so that they could not learn any strange words this way. And though there have been many changes of language from the variation of men's tempers, these we find have been frequent since this first confusion; but how or why they should arise at this time is the question. Language was fixed and stable, uniformly the same for almost two thousand years together; it was now some way or other unfixed, and has been so ever since. Some considerable writers seem to acknowledge themselves puzzled at this extraordinary accident. The confusion of tongues could not come from men, says St. Ambrose; for why should they incline to do mischief to themselves, or how could they invent so many languages as are in the world? It could not be occasioned by angels, good or bad, say Origen, and the Rabbins, and other writers; for they have not power enough to do it. The express words of Moses, *Go to, let us go down and confound their language;* and again, *the Lord did confound the language of the earth,* says Bishop Walton, imply a deliberate purpose of God himself to cause this confusion, and an actual execution of it. And the way in which it was performed, says the learned Bochart, immediately, and without delay, proves it the immediate work of God, who alone can instantly effect the greatest purposes and designs. Several of the Rabbins have inquired more curiously into the affair; but we fear the account they have given of it is poor and trifling. Buxtorf has collected all their opinions; but they seem to have put him out of humour with the subject, and to occasion him to conclude in the words of Mercerus, "There is no reason to inquire too curious into this matter; it was effected instantly, in a way and manner of which we can give no account; we know many things were done; but *how* they were done, we cannot say. It is a matter of faith."

MYTHOLOGY.

THE MUSES.

"The Muses are nine virgins, crowned with palms; their dress is decent and becoming. They sit together in the shade of a laurel arbor. Some of them play on the harp, some upon the cithern, some upon the pipe, some upon the cymbal, and some harmoniously sing and play at once.

"They are the mistresses of all the sciences, the presidents of the musicians and poets, and the governors of the feasts and solemnities of the gods. They are the daughters of Jupiter and the nymph Mnemosyne, and were born on the mountain Pierius. Some affirm that they had other parents, and ancient writers say, that they lived before Jupiter, and were the daughters of Cœlum. They are called the daughters of Jupiter and Mnemosyne, (which in Greek signifies "memory,") because all students and scholars ought not only to have great ingenuity, but ready memories.

"The first, Calliope, was so called from the sweetness of her voice; she presides over rhetoric, and is esteemed the most excellent of all the nine.—The second, Clio, is so named from glory. For she is the historical Muse, and takes her name from the excellence of the things she records.—The third, Erato, has her name from love, because she sings of amours, or because learned men are beloved and praised by others. She is also called Soltatrix; for she first invented the art of dancing, over which she presided. She was also the inventress of poetry.—The fourth, Thalia, from her gaiety, briskness, and pleasantry. Some ascribe to her the invention of comedy, others of geometry.—The fifth, Melpomene, from the excellence of her song and the melody she makes when she sings. She is supposed to have presided over tragedy, and to have invented sonnets.—The sixth, Terpsichore, has her name from the pleasure she takes in dancing, because she delights in balls. Some call her Citharistria.—The seventh, Euterpe, or Euterpia, from the sweetness of her singing. Some call her Tibicina, because, according to them, she presides over the pipes; and some say logic was invented by her.—The eighth, Polyphymnia, or Polymnia, or Polymenia, from her excellent memory: and therefore the invention of writing history is attributed to her, which requires a good memory: it was owing to her that the songsters add to the verses that they sing hands and fingers, which speak more than the tongue; an expressive silence; a language without words; in short, gesture and action.—The ninth, Urania, was so called either because she sings of divine things, or because, through her assistance, men are praised to the skies; or because, by the sciences, they become conversant in the contemplation of celestial things.

"The Muses are the favourite goddesses of the poets. The ancients used often to begin their verses by *invoking* the muse, that is, by a short address or prayer to one of the muses, entreating her to *inspire* the poet—to give him some portion of celestial intelligence, that his poetry be worthy of the favour of the goddess, and of the esteem of mankind.

"They are represented as nine beautiful virgins, sometimes dancing in a ring around Apollo, sometimes playing on various musical instruments, or engaged in scientific pursuits. They are called Muses, from a Greek word signifying to meditate, to inquire.

"The Muses had favourite haunts in Greece,—the vale of Tempe in Thessaly, Mount Parnassus in Phocis, Pieria in Thrace, the country Aonia, and Mount Helicon in Bœotia. Their fountains were Hippocrene and Castalia, at the foot of Parnassus. Their horse had wings, and was called Pegasus—when Pegasus struck the earth forcibly with his foot, the fountain Hippocrene sprung out.

"The Muses are frequently represented surrounding Apollo on Mount Parnassus or Helicon; while Pegasus, with extended wings, springs forward into the air."

THE NORTH-WEST PASSAGE.

(Continued from page 398 of Vol. I.)

From the London Saturday Magazine.

CAPTAIN FRANKLIN'S FIRST JOURNEY.

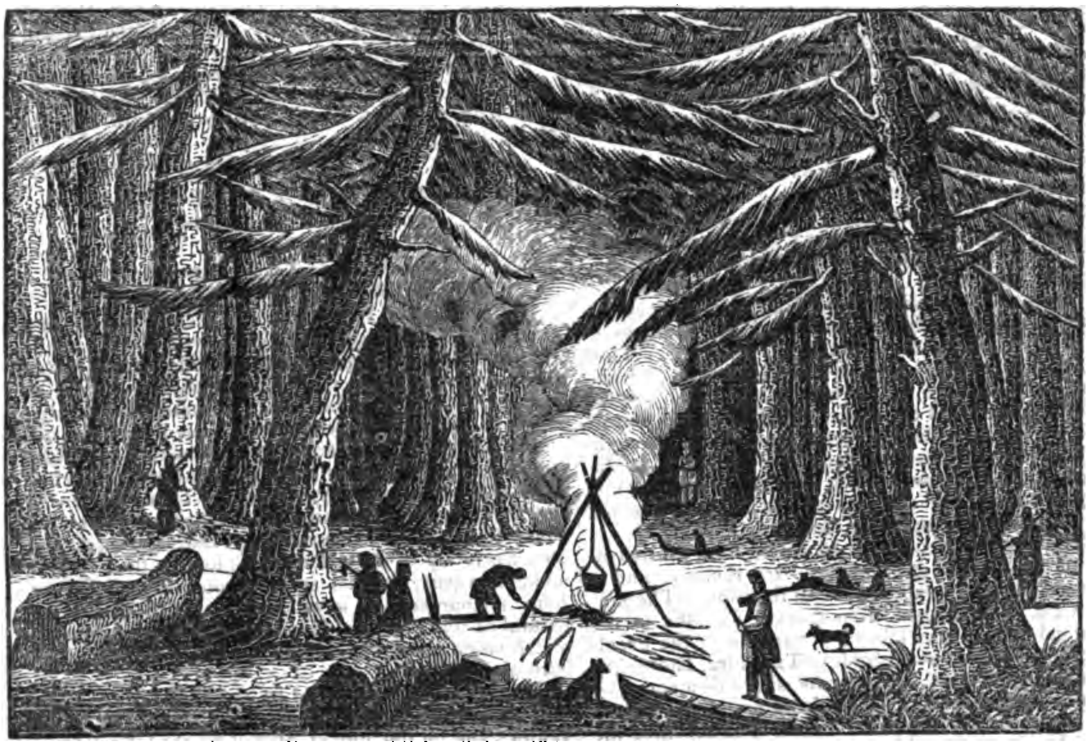
When Captain Parry was despatched on his first attempt to explore the Polar Sea, with a view to the discovery of a passage into the Pacific Ocean, it was considered not only that the expedition might be assisted in that object, but also, that material advantage might be rendered to geographical science, by the advance of a party over land to the shores of the Polar Sea, following the route by which Hearne had reached it in 1772. Accordingly, on the recommendation of the Lords of the Admiralty, Lieutenant (now Sir John) Franklin was appointed by Earl Bathurst, the then Secretary of State for the Colonies, to the command of a party for this service, consisting of Doctor John Richardson, a naval surgeon, well skilled in natural history; Messrs. Hood and Back, two admiralty midshipmen; and two English seamen named Hepburn and Wilks.

This party left Gravesend on the 23d of May, 1819, in the Hudson's Bay Company's ship, Prince of Wales; and on the 30th of August reached York Factory, the principal depot of the Hudson's Bay Company. Here they received every possible assistance from the servants of the Company, who used the utmost endeavours to forward their progress, and readily instructed them as to the different modes of travelling which it might be advisable to adopt. On the 9th of September, the party commenced their river journey into the interior, and on the 22d of October, reached Cumberland House, having travelled a distance of 690 miles. The winter was now beginning to set in; and the effect of a few days' frost convincing them of the impracticability of a further advance that season, they resolved to remain at this post until the ensuing spring. A conversation, however, with the gentlemen who had the charge of the establishment, was sufficient to assure Captain Franklin of the necessity of his proceeding, during the winter, into the Athabaska department, in order that he might be enabled to secure guides, hunters, and interpreters, and obtain information as to the countries lying to the north of the Great Slave Lake, before the season for active operations had begun. Accordingly, on the 18th of January, 1820, he departed for Fort Chepewyan, accompanied by Mr. Back and the seaman Hepburn; leaving Dr. Richardson and Mr. Hood at Cumberland House, to devote the remainder of the winter to scientific pursuits, with the intention that they should follow with the baggage early in the spring, as soon as the navigation was open. The other seaman, Wilks, having proved to be quite unequal to the fatigue of the journey, was discharged, and sent home by the next ship.

The mode of winter-travelling practised in these countries is twofold,—by conveyance in dog-sledges, or by walking in snow-shoes. The sledge is slight, and simple in its construction, consisting merely of two or three thin boards, which curve upwards in front, and are fastened together by pieces of wood running across their upper side. Its length is eight or ten feet, but the breadth inconsiderable; and the edges have a lacing attached to them, which serves to secure the lading. When used by the trader for his personal conveyance, it assumes a more finished character and appearance, under the name of *cariole*. A covering of leather is then fixed so as to protect the lower part of the body; and the whole machine is painted and ornamented according to the taste of the proprietor.

A snow-shoe is made of two light bars of wood, connected by several transverse bars, the spaces between which are filled with a fine netting of leathern thongs. To this the foot is attached by straps passing round the heel, but only fixing the toes, so as to allow the heel to rise after each step. To those who are unaccustomed to the use of these implements, the miseries occasioned by walking in them are said to be dreadful in the extreme. Galled feet and swelled ankles, and a track marked with blood, are the invariable accompaniments of the traveller's first trial; but the acuteness of his sufferings is gradually diminished, and soon ceases altogether.

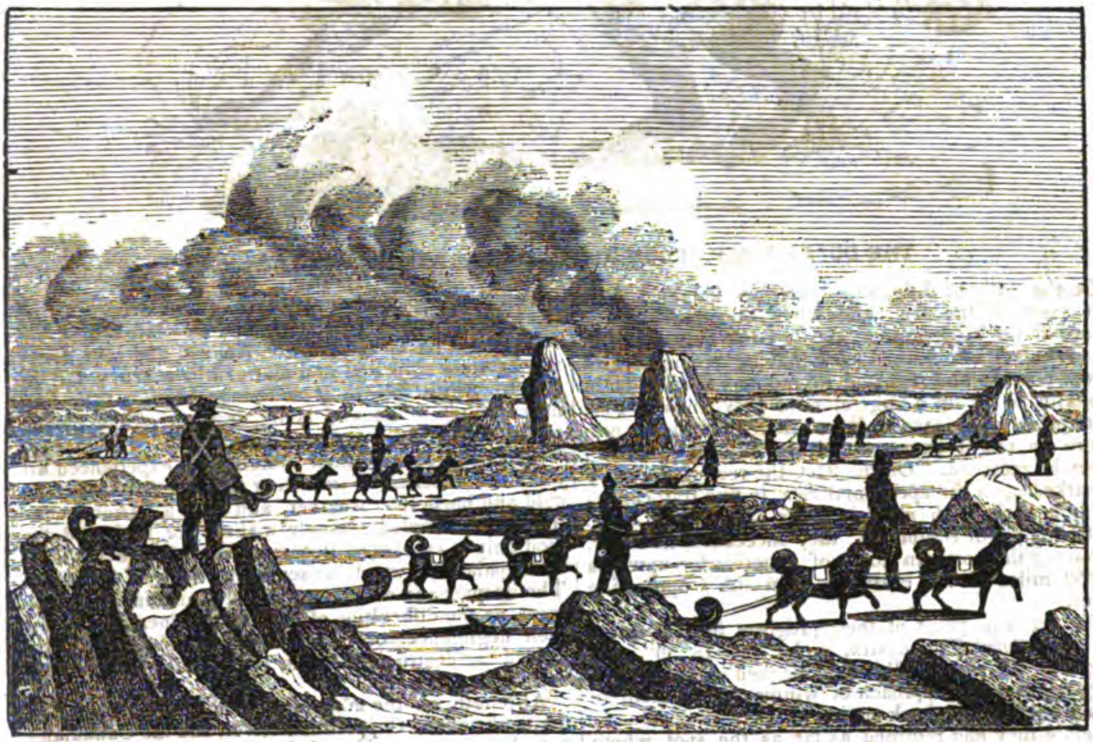
More than two months had elapsed before Captain Franklin reached Fort Chepewyan, the distance being 857 miles from Cumberland House. The whole of this journey lay through an inhospitable region, barren and almost uninhabited. The party travelled by day, and rested at night. Their mode of encampment was simple, and exposed them sufficiently to the severity of the weather. It consisted merely in clearing away the snow from the ground, and covering the space with pine-branches, over which the party spread their blankets and coats. A store of fuel was collected for the night, and the fire then kindled; the sledges were unstowed, the dogs unharnessed, and the provisions hung upon the trees out of the reach of these voracious animals. Supper was then cooked, and the weary travellers ranging themselves round the fire with their feet towards it, at length slept in warmth and comfort without any other canopy than the heavens. The engraving below from Captain Franklin's *Narrative*, will convey a correct notion of the manner of making this resting-place.



MANNER OF MAKING A RESTING-PLACE ON A WINTER'S NIGHT.

On the arrival of spring, Dr. Richardson and Mr. Hood rejoined their companions at Fort Chepewyan; and active preparations were now made for the advance of the expedition. A party of Indians were procured, to serve as guides and hunters, until they reached the mouth of the Coppermine River, and undertook to join them at a subsequent stage, where they were also to be met by a Mr. Wentzel, a clerk of the North West Company, who offered himself as a medium of communication with those people, among whom he had lived long and familiarly. Sixteen Canadian voyagers were also engaged to accompany them throughout the whole journey; and with these our five countrymen set out, on the 18th of July, for Fort Providence, which they reached on the 29th. Here they were joined by Mr. Wentzel and the Indians, and, on the 2d of August, finally departed, hoping to reach the mouth of the Coppermine before the season should expire. A variety of impediments, however, so obstructed them, that they were far distant from that point, when they found it necessary to form their winter establishment. The spot selected for this purpose, was reached on the 19th, and a house was there built, which was afterwards named Fort Enterprise. In the mean while, an excursion was made by the officers to the head of the Coppermine River, at Point Lake, about sixty miles to the northward, in order to satisfy themselves of its size and position.

The winter was passed in dull monotony; the officers employed themselves in writing out their journals, constructing the charts, and other similar occupations; and the men were chiefly engaged in seeking firewood. The provisions, however, of the party, were greatly reduced, and their ammunition nearly expended, even at this early period. To procure a further supply, and hasten the transport of the stores expected from Cumberland House, Mr. Back proceeded to Fort Chepewyan, and returned after an absence of nearly five months, during which he had travelled 1104 miles in snow-shoes, with no other covering in the woods on the wintry nights than a blanket and deer-skin. A part of this extraordinary journey lay across the Great Slave Lake; and the mode of travelling practised there is represented in the engraving below.



WINTER TRAVELLING ON THE GREAT SLAVE LAKE: FROM FRANKLIN'S NARRATIVE.

During his absence, a large party of the Copper Indians arrived at Fort Enterprise, and the impression which their kindness and attention produced was favourable. Captain Franklin relates an amusing incident, which strongly marks their simplicity. An old guide had a daughter, who was considered by her tribe to be a great beauty, insomuch that, although under sixteen years of age, she had already belonged successively to two husbands. Mr. Hood drew an accurate portrait of her, much to the annoyance of her mother, who was afraid, she said, that her daughter's likeness would induce the great chief who resided in England to send for the original. This portrait of *Green Stockings*, (as the young lady was called from her dress,) with that of her father, forms one of the plates which illustrate Captain Franklin's narrative.

It was not until the 14th of June, 1821, that the expedition was able to leave Fort Enterprise. Almost a year had now elapsed since they had quitted Fort Providence, and by this time their provisions were greatly reduced. As they proceeded down the Coppermine, however, the grassy plains on its banks afforded them an abundant supply of game. Deer and musk-oxen were also found in large herds, followed, as usual, by great numbers of bears and wolves. These last are gregarious animals, and so sagacious as rarely to be caught in any trap. The stratagem which they practise against the poor deer is as curious as it is successful, on plains bounded by precipitous cliffs.—"Whilst the deer," says Dr. Richardson, "are quietly grazing, the wolves assemble in great numbers, and, forming a crescent, creep slowly towards the herd, so as not to alarm them much at first; but when they perceive that they have fairly hemmed in the unsuspecting creatures, and cut off their retreat across the plain, they move more quickly, and with hideous yells terrify their prey, and urge them to flight by the only open way, which is that towards the precipice, appearing to know, that when the herd is once at full speed, it is easily driven over the cliff, the rearmost urging on those that are before; the wolves then descend at their leisure, and feast on the mangled carcasses." These voracious animals were disposed to practise this manœuvre one evening upon Dr. Richardson, as he was sitting musing on the summit of a precipice, overlooking the Coppermine River. Hearing a slight noise behind him, he turned round, and saw nine white wolves approaching in the form of a crescent; aware of their intentions, the Doctor got up and walked boldly towards them, when they immediately made an opening and let him pass. We give below a representation of one of the dusky variety of this animal (*Lupus Nubilus.*) It will be quite a curiosity to many of our readers.

THE DUSKY WOLF. FROM RICHARDSON'S "ARCTIC ZOOLOGY."

On the 14th of July, our travellers obtained their first view of the sea; and when they reached the mouth of the Coppermine, the Indians quitted them. Mr. Wentzel also turned back, having previously received positive and repeated injunctions from Captain Franklin, to lay up a large store of provisions at Fort Enterprise, and leave a letter there, informing him where he might expect to fall in with the hunters when he returned. On the 21st, the rest of the party embarked upon the open Polar Sea, in two frail canoes of birch bark, with provisions for only fifteen days. With this slight equipment, they succeeded, however, in tracing the northern coast of America for upwards of 550 miles to the eastward from the Coppermine River.

The extreme point of their progress in that direction was *Point Turnagain*, in lat. 68° 18′ 50″, and long. 109° 25′ west. This they reached on the 16th of August, when the approach of winter obliged them to retrace their course back again.

Before they had returned as far as the spot where the river, which they had named after Hood, empties itself into the sea, their provisions were entirely consumed. They well knew from experience that the coast along which their track lay would offer but very scanty means of recruiting their exhausted supply, and that even those means would gradually lessen, as the winter advanced. Accordingly, Captain Franklin resolved to alter his intended route, and proceeding up Hood's River, to strike across the interior, and make directly for Fort Enterprise. They had, however, scarcely advanced far up that stream, when they were stopped by finding it pour its whole body over a ledge of rock, in a splendid fall 250 feet in height.* On the further side, the stream decreased so much, that they were obliged to abandon its navigation, and pursue their journey on foot. For this purpose, the canoes were rendered more portable, their assistance being still needed to carry the party across the rivers and lakes which they expected to meet with; and every part of the baggage not absolutely wanted was left behind.

They set off on the 31st of August, and soon afterwards, were surprised and alarmed by a heavy fall of snow. With this their sufferings began; they had now nothing to eat, and being destitute of the means of making a fire, remained two whole days in bed. When they resumed their march, they experienced all the bitter miseries of travelling through deep snow, in cold and boisterous weather, and over a barren country, which afforded scarcely a shrub for fuel, and for food only a species of lichen called *tripe de roche*,—an unpalatable weed, as scanty as it was nauseous. The despair and discontent of the Canadians became great, as the difficulties of the journey increased; and their negligence, or more probably their wilfulness, caused the destruction of the two canoes which they carried.

At length, on the 26th of September, they reached the banks of the Coppermine River, and the Canadians now began to consider their misfortunes at an end; but the river was yet to be passed, before they could approach the place of their destination, and their fatal rashness had destroyed their only means of crossing it. An immediate search was made for pines to construct a raft, but none were to be found. Willows were more plentiful, and a number were gathered and bound into faggots, so as to form a sort of float. But this, from the wood being green, had very little buoyancy, and was rendered utterly useless by the want of oars or poles to propel it against an unfavourable wind. Under these circumstances, there seemed nothing left for them but to remain where they were and starve. Dr. Richardson, however, nobly undertook to make a last effort for the relief of the suffering party, by proposing to swim across the river, (whose breadth was about 130 yards,) with a line attached to his body, and then haul the raft after. "He launched into the stream," says Captain Franklin, "with a line round his middle; but when he had got a short distance from the bank, his arms became benumbed with cold, and he lost the power of moving them; still he perse vered, and, turning on his back, had nearly gained the opposite bank, when his legs also became powerless, and, to our infinite alarm, we beheld him sink. We instantly hauled upon the line, and he came again to the surface, and was gradually drawn ashore in an almost lifeless state. Being rolled up in blankets, he was placed before a good fire of willows, and, fortunately, was just able to speak sufficiently to give some slight directions respecting the manner of treating him. He recovered strength gradually, and, by the blessing of God, was enabled, in the course of a few hours, to converse, and by evening was sufficiently recovered to remove into the tent. We then regretted to learn, that the skin of his whole left side was deprived of feeling, in consequence of exposure to too great heat. He did not perfectly recover the sensation of that side until the following summer. I cannot describe what every one felt at beholding the skeleton which the Doctor's debilitated frame exhibited. When he stripped, the Canadians simultaneously exclaimed, *Ah que nous sommes maigres!*

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* Our readers will find a view and description of this magnificent cascade in the Family Magazine, No. 7, Vol. I. page 52, under the name of the Wilberforce Falls.

NATURAL HISTORY.

THE ELEPHANT.

(Continued.)

"The Elephant, once tamed, becomes the most tractable and the most submissive of all animals; he conceives an affection for his leader, he caresses him, and seems to guess whatever can please him: in a little time he understands the signs, and even the expression of sounds; he distinguishes the tone of command, that of anger or good nature, and acts accordingly: he never mistakes the words of his master; he receives orders with attention, and executes them with prudence and eagerness, without precipitation; for his motions are always measured, and his character seems to participate of the gravity of his body; he is easily taught to bend the knee to assist those who will ride on his back; he caresses his friends with his trunk, and salutes with it the persons he is directed to take notice of: he makes use of it to lift burdens, and helps to load himself; he has no aversion to being clothed, and seems to delight in a golden harness or magnificent trappings; he is easily put to the traces of carts, and draws ships upon occasion: he draws evenly, without stopping, or any marks of dislike, provided he is not insulted by unreasonable correction, and provided his driver seems to be thankful for the spontaneous exertion of his strength. His leader is mounted on his neck, and makes use of an iron rod crooked at the end, with which he strikes him gently on the head to make him turn or increase his pace; but often a word is sufficient, especially if he has had time to make himself well acquainted with his leader, and has a confidence in him; his attachment is sometimes so strong and so lasting, and his affection so great, that commonly he refuses to serve under any other person, and he is known to have died of grief for having in anger killed his governor.

"The species of the Elephant is numerous, though they bring forth but one young once in two or three years; the shorter the life of animals is, the more they multiply: in the Elephant, the length of his life compensates the small number; and if it is true, as has been affirmed, that he lives two hundred years, and that he begets when he is one hundred and twenty years old, each couple brings forth forty young in that space of time; besides, having nothing to fear from other animals, and little even from men, who take them with great difficulty, the species has not decreased, and is generally dispersed in all the southern parts of Africa and Asia.

"From time immemorial, the Indians made use of Elephants in war. Amongst those nations unacquainted with the European military discipline, they were the best troop of their armies; and as long as battles were decided by mere weapons, they commonly vanquished: yet we see in history, that the Greeks and Romans used themselves soon to those monsters of war; they opened their ranks to let them go through; they did not attempt to wound them, but threw all their darts against their leaders, who were forced to surrender, and to calm the Elephants when separated from their troops; and now that fire is become the element of war, and the principal instrument of death, the Elephants, who are afraid of the noise and the fire of the artillery, would be rather an incumbrance in battle, and more dangerous than useful.

"In those regions, however, where our cannons and murdering arts are yet scarcely known, they fight still with Elephants. At Cochin, and in the other parts of Malabar, they do not make use of horses, and all those who do not fight on foot are mounted upon Elephants. In Tonquin, Siam, and Pegu, the king and all the grandees never ride but upon Elephants: on festival days they are preceded and followed by a great number of these animals richly caparisoned, and covered with the richest stuffs. On comparing the relations of travellers and historians, it appears that the Elephants are more numerous in Africa than in Asia; they are there also less mistrustful, not so wild, and, as if they knew the unskilfulness and the little power of the men with whom they have to deal in this part of the world, come every day without fear to their habitations.

"In general, the Elephants of Asia are of a larger size, and superior in strength to those of Africa; in particular, those of Ceylon, who exceed in courage and sagacity all those of Asia; probably they owe these qualifications to their education, more improved in Ceylon than any where else. They differ also in other particulars, so as to constitute them a different species.

"His head (says Mr. Bennett) is more oblong, and his forehead presents in the centre a deep concavity between two lateral and rounded elevations; that of the African being round and convex in all its parts. The teeth of the former are composed of transverse vertical laminæ of equal breadth, while those of the latter form rhomboidal or lozenge-shaped divisions. The ears of the Asiatic are also smaller, and descend no lower than his neck, and he exhibits four distinct toes on his hind feet; the African, on the contrary, is furnished with ears of much greater size, descending to his legs, and no more than three toes are visible in his posterior extremities."

"The Elephants of the Indies easily carry burthens of three or four thousand weight; the smallest, that is those of Africa, lift up freely with their trunks burdens of two hundred pounds weight, and place them on their shoulders; they take in this trunk a great quantity of water, which they throw out around them at seven or eight feet distance; they can carry burdens of more than a thousand weight upon their tusks; with their trunk they break branches of trees, and with their tusks they root out the trees. One may judge of their strength by their agility, considering at the same time the bulk of their body; they walk as fast as a small horse on the trot, and when they run, they can keep up with a horse on full gallop, which seldom happens in their wild state, except when they are provoked by anger, or frightened. The tame Elephants travel easily, and without fatigue, fifteen or twenty leagues a day; and when they are hurried, they may travel thirty-five or forty leagues. They are heard at a great distance, and may be followed very near on the track, for the traces which they leave on the ground are not equivocal; and on the ground where the steps of their feet are marked, they are fifteen or eighteen inches in diameter.

"When the Elephant is taken care of, he lives a long while even in captivity. Some authors have written, that he lives four or five hundred years; others, two or three hundred; and the most credible, one hundred and twenty, thirty, and even one hundred and fifty years. Whatever care, however, is taken of the Elephant, he does not live long in temperate countries, and still less in cold climates. The Elephant which the king of Portugal sent to Louis XIV. in 1668, and which was then but four years old, died in his seventeenth year, in Jan. 1681, and lived only thirteen years in the menagerie of Versailles, where he was treated with care and tenderness, and fed with profusion; he had every day four pounds of bread, twelve pints of wine, two buckets of porridge, with four or five pounds of bread, two buckets of rice boiled in water, without reckoning what was given to him by visiters: he had, besides, every day one sheaf of corn to amuse himself; for, after he had eaten the corn ears, he made a kind of whip of straw, and used it to drive away the flies; he delighted in breaking the straw in small bits, which he did with great dexterity with his trunk; and, as he was led to walk daily, he plucked the grass and ate it.

"The common colour of the Elephant is ash-grey, or blackish. The white are extremely scarce; some have been seen at different times in the Indies, where also some are found of a reddish colour.

"The Elephant has very small eyes comparatively with his enormous size, but they are sensible and lively; and what distinguishes them from all other animals is their pathetic, sentimental expression. He seems to reflect, to think, and to deliberate; and never acts till he has examined and observed several times, without passion or precipitation, the signs which he is to obey. Dogs, the eyes of which have much expression, are animals too lively to distinguish their successive sensations; but as the Elephant is naturally grave and sedate, one may read in his eyes the order and outward appearance of his interior affections.

"He has a quick hearing, and this organ is outwardly, like that of smelling, more marked in the Elephant than in any other animal; his ears are very large, even in proportion to his body; they are flat, and close to the head, like those of a man; they commonly hang down, but he raises them up, and moves them with great facility; he makes use of them to wipe his eyes, and to cover them against the inconveniency of dust and flies. He delights in the sound of instruments, and seems to like music; he soon learns to beat time, and to move accordingly: he seems animated by the beat of the drum and the sound of trumpets; he has an exquisite smell, and is passionately fond of perfumes of all sorts, and of fragrant flowers; he selects them one after another, and makes nosegays, which he smells with great eagerness, and then carries them to his mouth as if he intended to taste them.

"His sense of feeling centres in his trunk; but it is as delicate and as distinct in that sort of hand as in that of man; this trunk, composed of membranes, nerves, and muscles, is, at the same time, a member capable of motion, and an organ of sense: the animal cannot only move and bend it, but he can shorten, lengthen, and turn it always. The extremity of his trunk terminates by an edge, which projects above like a finger; it is with this sort of finger that the Elephant does whatever we do with ours; he picks up from the ground the smallest pieces of money; he gathers nuts and flowers, choosing them one after another; he unties knots, opens and shuts doors, turning the keys, and bolts them; he learns to draw regular characters with an instrument as small as a pen.

"Although the Elephant has a more retentive memory and more intelligence than any other animal, he has the brain smaller than most of them: he is at the same time a miracle of intelligence and a monster of matter; his body is very thick, without any suppleness; the neck is short and very stiff; the head small and deformed; the ears of an excessive diameter; and the nose is of a still more disproportionate length; the eyes are too small, as well as the mouth; his legs are like massive pillars, straight and stiff; the feet so short and so small, that he seems to have none; the skin is hard, thick, and callous. All these peculiarities are remarkable, as all of them are exhibited in large; and they are more disagreeable to the eye, as most of their deformities have no other example in the creation; no other animal having either the head, the feet, the nose, the ears, or the tusks, made or placed like those of the Elephant.

POETRY.

MAY.—J. G. PERCIVAL.

I FEEL a newer life in every gale;
  The winds, that fan the flowers,
And with their welcome breathings fill the sail,
  Tell of serener hours,—
 Of hours that glide unfelt away
 Beneath the sky of May.

The spirit of the gentle south-wind calls
  From his blue throne of air,
And where his whispering voice in music falls,
  Beauty is budding there;
 The bright ones of the valley break
 Their slumbers, and awake.

The waving verdure rolls along the plain,
  And the wide forest weaves,
To welcome back its playful mates again,
  A canopy of leaves;
 And from its darkening shadow floats
 A gush of trembling notes.

Fairer and brighter spreads the reign of May;
  The tresses of the woods
With the light dallying of the west-wind play;
  And the full-brimming floods,
 As gladly to their goal they run,
 Hail the returning sun.

Sir Thomas Urquhart tells us that John Napier, the father of the first Lord, and the inventor of logarithms, had invented a destroying engine that would clear a space a mile in extent each way of the enemy; in other words of thirty thousand Turks without the loss of a Christian. But on being requested by his friends in his last illness to reveal the contrivance, he replied, "That if he could lessen the means already existing for the destruction of man, he would with all his might apply himself to the purpose, but that they should never by his means be increased." He died in 1617.

The tomb of Franklin is in the Friends' cemetery, at the corner of Fourth and Arch Streets, Philadelphia, by the third pannel of the wall. It has inscribed on it,

BENJAMIN FRANKLIN,
1790.

It is a plain stone monument, elevated one foot above ground.

FULLING.

The art of cleansing, scouring, and pressing cloths, to make them stronger, closer, and firmer, which is done by means of a water mill, called a fulling or scouring mill. These mills are nearly the same as corn mills, except in the mill-stones and the hopper. In France, corn is ground and cloth is fulled by the motion of the same wheel: cloths and woollen stuffs are sometimes fulled by means of soap, in the following manner: the cloth is laid in the trough of the fulling mill, and then the soap dissolved in pails of river or spring water is to be poured upon it by little and little. The cloth, after lying two hours in the soap, is taken out, stretched, and then returned to the trough. Upon being taken out a second time, the grease and filth is then wrung out. This process is afterwards repeated, and when the cloth has thus been brought to the quality and thickness required, it is scoured in hot water until it is quite clean.

SECTION IV.

HISTORY.

It is not to be supposed that there is any period of the world without its history. It is not in the nature of things, that the memory of whole generations can ever be effaced from the human mind. Moreover, it is to be expected that there will be a general tendency of tradition and circumstance in favour of authentic history, and a destitution of the same in the case of that which is spurious. Applying these tests to history as far as we have already given it, we find it all that could be desired in these respects. We find all traditions, all circumstances sustaining it. Yea, more: we find no counter, no rival history. If, then, we have not given the true history of the early ages of the world, where can it be found, and where are its evidences? Let those who object to this history as we have given it, produce and prove another, or withdraw their objections.

We have now reached the close of the third period in history, including the space of time from the confusion of language, to the dispersion and settlement of the various nations produced by that confusion. It remains that we consider the

DISTINGUISHED CHARACTERS OF THIS PERIOD.

Asshur, a son of Shem, founded the Assyrian empire. He was an emigrant from the plains of Shinar. He built four cities, viz. Nineveh, Rehoboth, Calah, and Resen.

Mizraim or Menes, one of the sons of Ham, founded the Egyptian monarchy. He is generally supposed to have built Memphis, diverting the course of the Nile for that purpose, and founding the city in the ancient bed of that river. He is said to have reigned sixty-two years over Upper Egypt, and forty-five over Lower Egypt. We doubt, however, whether at the first settlement of Egypt it was of sufficient consideration to constitute two princedoms as here represented. On the contrary we should incline to the opinion, that a small colony in so short a period would hardly constitute one passable sovereignty. Mizraim appears to have been possessed of wisdom and ability, which rendered him extremely popular; insomuch that after his death he was worshipped as a god.

Elam was another of the noted characters of this period. He was a son of Shem, and settled in Persia; whence the Persians were denominated Elamites, and the chief province of the Persian empire, in which was situated Shushan, the seat of the Persian monarchs, was denominated Elam.

Arphaxad, the eldest son of Shem, was the one in whom the patriarchal line was continued. He was born two years after the Flood. He appears to have taken up his final residence at Ur of the Chaldees. He attained to the age of 438 years.

Salah was the son of Arphaxad. In him was continued the patriarchal line. He lived 433 years.

Eber was the son of Salah, and his patriarchal successor. From Eber the Hebrews derive their name. He lived till he was 464 years of age.

Peleg was the son of Eber. He was another of the patriarchs. In his days was the earth divided. He attained the age of 239 years.

Jocktan was the brother of Peleg, and was celebrated as the father of thirteen sons, all of whom were of sufficient note to be mentioned by name in the history of those early times. Their names were the following: Almodad, Sheleph, Hazarmaveth, Jerah, Hadoram, Uzal, Diklah, Obal, Abimael, Sheba, Ophir, Havilah, and Jobab. "Their dwelling," says Moses, "was from Mesha, as thou goest unto Sephar, a mount of the east."

We will now resume our story, by considering the fourth period in history, viz. from the establishment of the various nations of antiquity in their respective countries, to the time of the separation of Abraham from his kindred. But we have reached a period when it becomes necessary to attend to each nation separately. We shall commence with the Chinese, as being in all probability the community founded by Noah himself, and therefore the most ancient of all the nations of the earth.

CHINA.

The authentic records of this empire extend backward more than 2200 years before the Christian era; that is, less than 1800 years from the creation of the world. The pretensions of the Chinese to a far greater antiquity than is here assigned to them, are altogether unsupported by, and contrary to, all historical records whatever, and have been proved to be totally unfounded. Their astronomical pretensions have been ascertained to be false; for, after all their boasted skill in this respect, it appears they were unable to make an accurate calendar; and their tables of eclipses were so incorrect, that they could scarcely foretel about what time an eclipse of the sun would happen. And their pretended dates, extending back millions of years, are the veriest fictions, destitute of the semblance of reality, and unsupported by any thing whatever.*

The sovereignty of China, from its commencement to the present time, is divided into 22 dynasties, the first of which, viz. that of Hia, began 2207 years before Christ, and was founded by Yu, surnamed Ta, or the Great. This, however, was the commencement of the Chinese *monarchy*, and not the commencement of *the settlement of the country*. According to the opinion of some, a colony formed at the Dispersion, under the guidance of Yao, formed the first settlement in this country. Chun succeeded Yao as Head of the colony, having been previously adopted by Yao as his colleague. But according to the opinion of others, Fo-hi (or Noah) was the founder of this colony.

Chun adopted as his successor Yu-ta, in preference to his own children. Yu-ta, as has been seen, founded the Chinese *monarchy*; by which it would appear that he changed the form of government from the patriarchal to the monarchical. He was well skilled in agriculture, astronomy, and kindred subjects. On the subject of agriculture, he wrote an excellent treatise. He reigned 17 years, and died greatly lamented.

This dynasty continued 441 years, under 17 emperors. Hya, the last of the 17, was detested by his subjects for his vices; was expelled from his throne and sent into exile; and, after an ignominious retreat of three years, departed the present life.

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* See Jenkin's Reasonableness of Christianity, vol. i. pp. 330—343; Winder's History of Knowledge, vol. ii. chaps. x.—xx and Law's Theory of Religion, pp. 242—245, note z.

LITERATURE.

LANGUAGE.

One striking feature in the languages which sprung from the Confusion is, that many of their words consist of more than one syllable, contrary to the primitive language. And it may be generally remarked, that the further a language departs from its primitive character, and the more refined it becomes, the more it abounds in polysyllables; and *vice versa* of course. Our own tongue formerly abounded with monosyllables; insomuch that if one were to take the pains, he could express almost any thing necessary, without using words of more than one syllable.

There have been various conjectures relative to the number of languages occasioned by the Confusion. Some suppose there were as many as there were individuals mentioned by Moses in his genealogy of the descendants of Shem, Ham, and Japheth, Gen. x. Others suppose the number to have been seventy. This they infer from the following passage:—"When the Most High divided to the nations their inheritance; when he separated the sons of Adam; he set the bounds of the people according to the number of the children of Israel." Deut. xxxii. 8. That is, (according to those of this opinion,) the number of the children of Israel that went down to Egypt, viz. seventy. The Targum of Jonathan Ben Uziel favours this interpretation; but the Jerusalem Targum differs from it. According to this, the number of languages was but twelve, answering to the twelve tribes. The Greek and Latin fathers make the number seventy-two. We conclude, however, that it was much smaller than many suppose; much smaller than the number of the various dialects now existing in the world. We have seen that the Chaldean and Hebrew were probably at first the same language. And it is the concurrent testimony of many authors, that the ancient Hebrew was likewise similar to the Phœnecian, and probably to the Assyrian language. Indeed, all the nations in those parts spoke and wrote the same language for a long time. Supposing, then, that other portions of mankind equally extensive had among each portion but one kind of language, the number of kinds must have been very few. But in process of time, nation communicating with nation, and climates and local circumstances combining, various additional dialects were formed, and the number of languages increased. Besides this, the difference between the languages which existed in consequence of the Confusion, would from the same causes be increased. And thus, in our day, we find a great number of nations speaking diverse tongues totally unintelligible to one another.

One subject of no little inquiry in relation to language, is the origin of letters. The speculations on this point have been many and various. The Egyptians claimed the honour of the invention of letters for Thyoth or Pathrusim, the king of Thebes, one of the sons of Mizraim. This Thyoth was the Hermes of the Egyptians, and the Mercury of the Greeks. The most ancient fragments of Egyptian literature were certain inscriptions on lumps of burnt earth, called *selai* or pillars, which, some ages after the time of Pathrusim, were discovered in certain caves near Thebes or Diospolis.* Agathodæmon, called the *second* Mercury, decyphered them. They were forty-two in number;† thirty-six of which related to the origin of the world and the history of mankind, and the remaining six to medicine. The thirty-six are supposed to have been the work of Thyoth, and the six that of Naphtuhim or Tosorthrus, his brother, who was king of the parts of Egypt about Memphis, and was noted for his medical knowledge.

We have much additional matter to present our readers on the subject of language. Those who follow us closely, will, we trust, be well repaid for their pains.

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* vucellus, p. 40. † Clem. Alex. Strom. l. vi. sed. 4; p. 758.

NATURAL HISTORY.

THE ELEPHANT.

(Concluded.)

"The Elephant is yet singular in the conformation of the feet and the texture of the skin. He is not clothed with hair like other quadrupeds: his skin is bare; some bristles issue out of the chops; they are very thin on the body, and thicker on the eyelids, on the back part of the head, within the ears, the thighs, and the legs. The epidermis, or outside skin, hard and callous, has two sorts of wrinkles, some hollow, others prominent. In man and other animals, the epidermis sticks every where close to the skin. In the Elephant, it is only fastened by some points like two quilted stuffs one above the other. This epidermis is naturally dry, and soon acquires three or four lines of thickness, by the crusts which are generated one above the other drying up. It is this thickness of the epidermis which produces the *elephantiasis*, or dry leprosy, to which man, whose skin is bare, like that of the Elephant, is sometimes subject. This distemper is very common to Elephants; and to prevent it, the Indians take care to rub them often with oil, and to preserve the skin supple by frequent bathing. It is rather tender where it is not callous; and the Elephant is so fearful of the sting of the flies, that he not only employs his natural motions, but even the resources of his intelligence, to get rid of them; he makes use of his tail, of his ears, of his trunk, to strike them; he contracts his skin wherever he can, and squeezes them to death betwixt his wrinkles. His skin is cleaned by rubbing it with pumice stones, and afterwards pouring on it perfumed oil and colours. The conformation of the feet and legs is also singular, and different in the Elephant from that of other animals; the fore-legs seem to be higher than those behind, yet the hind-legs are the longest; they are not bent like the hind-legs of a horse or an ox, the thighs of which seem to be of the same piece with the buttocks; their knee is very near the belly, and the foot so high and so long, that it seems to make a great part of the leg. In the Elephant, on the contrary, this part is very short, and touches the ground; he has the knee, like man, in the middle of the leg, not near the belly. This foot, so short and so small, is divided into five toes, which are all covered with a skin, none appearing outwardly; one sees only a sort of claws, the number of which varies, though that of the toes is constant; for he has always five to each foot, and commonly also five claws; but he sometimes has no more than four, or even three; and, in this case, they do not correspond exactly with the extremity of the fingers.

"The ears of the Elephant are very long; his tail is not longer than the ear; it is commonly near three feet in length; it is rather thin, sharp, and garnished at the extremity with a tuft of large, black, shining, and solid bristles which are as large and as strong as wire; and a man cannot break them with his hands, as they are elastic and pliant. This tuft of hair is an ornament which the Negro women are particularly fond of; and they attribute to it some particular virtue, according to their superstitious notions; an Elephant's tail is sometimes sold for two or three slaves; and the Negroes often hazard their lives to cut and snatch it from the living animal.

"The largest Elephants of the Indies, and the eastern coast of Africa, are fourteen feet high; the smallest, which are found in Senegal, and in the other western parts of Africa, are not above ten or eleven feet; and those which have been brought young into Europe were not so high. That at the menagerie at Versailles, which came from Congo, was but seven feet and a half high in his seventeenth year. During thirteen years that he lived in France, he did not grow above a foot; so that at the age of four, when he was sent, he was only six feet and a half high.

"In order to give a complete idea of the nature and intelligence of this singular animal, we shall insert here some particulars communicated by the Marquis of Montmirail. The Indians make use of the Elephant to carry artillery over mountains; and it is then that he gives the greatest proofs of his intelligence. He acts in the following manner:—When the oxen, yoked two and two, endeavour to draw up the mountain the piece of artillery, the Elephant pushes the breech of the gun with his forehead; and at every effort that he makes, he supports the carriage with his knee, which he places near the wheel; and it seems as if he understood what was said to him. When his leader employs him in some hard labour, he explains what is his work, and the reasons which ought to engage him to obey. If the Elephant shows an aversion to comply, the *cornac* (so his leader is called) promises to give him arrack, or something he likes; then the animal agrees to every thing proposed: but it is dangerous to forfeit his word; more than one *cornac* has been the victim of his deception. An instance of this happened in the De[illegible] which deserves to be recorded; and, however incredible it may appear, it is exactly true. An Elephant had been revenged of his cornac by killing him. His wife, witness of the catastrophe, took her two children and threw them at the feet of the animal, still furious, telling him, *Since thou hast killed my husband, take also my life and that of my children.* The Elephant stopped short, grew calm, and, as if he had been moved with regret and compassion, took with his trunk the largest of the two children, placed it on his neck, adopted him for his cornac, and would have no other leader.

"If the Elephant is vindictive, he is no less grateful. A soldier of Pondicherry, who commonly carried to one of these animals a certain measure of arrack every time that he received his pay, having one day drank more than common, and seeing himself pursued by the guard, who threatened to conduct him to prison, took refuge under the Elephant, and slept there. It was in vain that the guard attempted to draw him out from this asylum; the Elephant defended him with his trunk. The next day the soldier, become sober, was struck with terror to lie under an animal of this enormous bulk. The Elephant, who no doubt perceived his consternation, caressed him with his trunk to remove his fears, and made him understand that he might depart freely.

"The Elephant falls sometimes into a sort of phrenzy, which deprives him of his tractableness, and makes him extremely formidable. This commonly happens at the season when the male is desirous of the female. He is commonly killed on the first symptoms of madness, for fear of mischief.* Sometimes he is tied with heavy chains, in hopes that he will come to himself; but when he is in his natural state, the most acute pains cannot engage him to do any harm to persons who have not offended him. An Elephant, furious with the wounds which he had received in battle at Hambour, ran through the fields, and cried out in a most hideous manner. A soldier, who, notwithstanding the warning of his companions, could not fly, perhaps because he was wounded, remained in his way; the Elephant was afraid to trample him under his feet, took him with his trunk, placed him gently on one side of the road, and continued his march. The gentlemen of the Academy of Sciences have also communicated to us some facts which they have learned from those who governed the Elephant at the menagerie of Versailles; and these facts seem to deserve a place. 'The Elephant seemed to discern when any person made a fool of him; and he remembered the affront to be revenged of it the first opportunity. Having been balked by a man, who feigned to throw something into his mouth, he struck him with his trunk, and broke two of his ribs; afterwards he trampled him under his feet, and broke one of his legs; and having kneeled down, he tried to thrust his tusks into the man's belly, which, however, went into the ground on both sides of the thigh, which was not wounded. He bruised another man, by squeezing him against the wall, for a similar mockery. A painter was desirous to draw him in an extraordinary attitude, which was, to keep his trunk erect, and the mouth open. The servant of the painter, to make him remain in that attitude, threw fruits into his mouth; but afterwards he deceived him, which provoked his indignation; and, as if he had known that the cause of this deception was the painter's desire of having him drawn, he was revenged on the master by throwing with his trunk a great quantity of water, which spoiled the paper intended for his design.'

"He made less use of his strength than of his dexterity, which was such, that he untied, with great facility, a double leather string which fastened his leg, with his mouth untying it from the buckle's tong; and after this buckle had a small string twisted [illegible] it, with divers knots, he untied them all without breaking any thing. One night, that he had thus disentangled himself from his leather strings, he broke open so dexterously the door of his lodge, that his governor was not awaked by the noise. He went thence into diverse yards of the menagerie, breaking open the doors that were shut, and pulling down the stone work, when the passage was too narrow for him; and thus he went into the lodges of other animals, terrifying them to such a degree, that they ran away to hide themselves in the most remote part of the park. In fine, to omit nothing of what may contribute to make all the natural faculties of this animal perfectly known, as well as his acquired knowledge, we shall add some facts, extracted from the most credible authors.

"Of five Elephants (says Tavernier) which hunters had taken, three escaped, although their bodies and their legs were fastened with chains and ropes. These men told us a very surprising circumstance, if we can believe it, which is, that when once these Elephants have been caught, and eluded the snares of their adversaries, if they are compelled to go into the woods, they are mistrustful, and break with their trunk a large branch, with which they sound the ground before they put their foot upon it, to discover if there are any holes on their passage, not to be caught a second time; which made the hunters who related this singularity despair of catching again the three Elephants who had escaped. We saw the other two which they had caught; each of them was betwixt two tame Elephants; and around the wild Elephants were six men, holding spears. They spoke to these animals in presenting them something to eat, and telling them, in their language, *Take this, and eat it.* They had small bundles of hay, bits of black sugar, or rice boiled in water, with pepper. When the wild Elephant refused to do what he was ordered, the men commanded the tame Elephants to beat him, which they did immediately; one striking his forehead with his; and when he seemed to aim at revenge against his aggressor, another struck him; so that the poor wild Elephant perceived he had nothing to do but to obey.

"I have observed several times (says Edward Terry) that the Elephant does many things which are rather an indication of human reasoning, than a simple, natural instinct. He does whatever his master commands him. If he orders him to frighten any person, he advances towards him with the same fury as if he would tear him to pieces; and when he comes near him, he stops short, without doing him any harm. If the master wishes to affront another, he speaks to the Elephant, who takes with his trunk dirty water, and throws it at his face. The Mogul has Elephants for the execution of criminals condemned to death. If their leader bids them dispatch these wretches soon, they tear them to pieces in a moment with their feet; on the contrary, if he commands them to make these criminals languish, they break their bones one after another, and make them suffer torments as cruel as those of the wheel.

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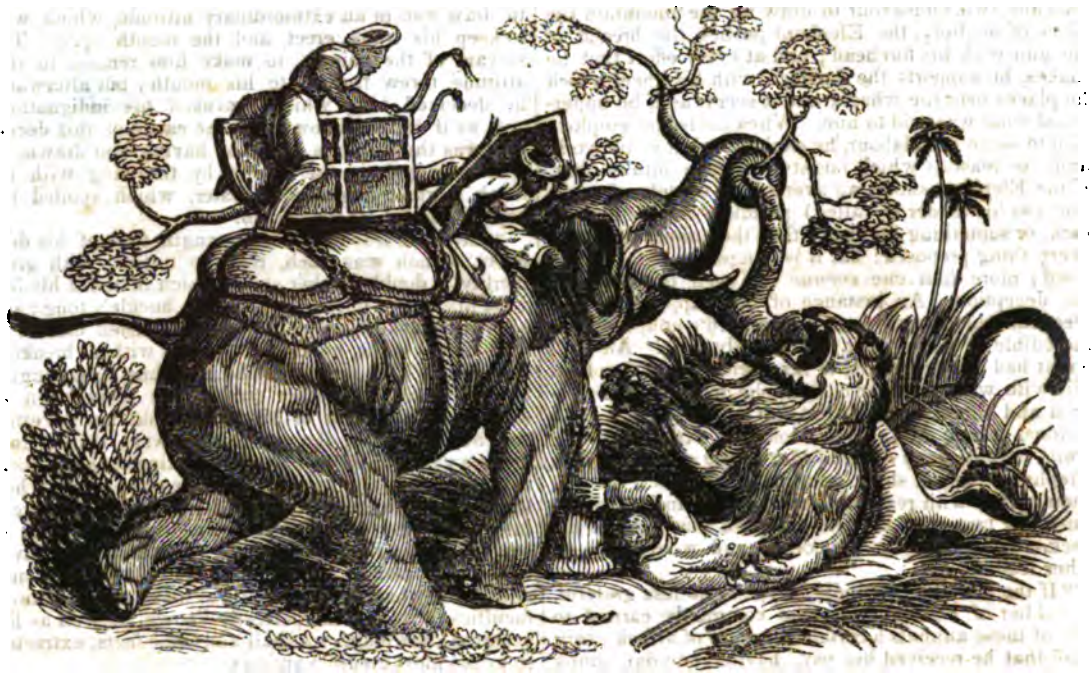
*Two instances have happened, within a few years, one at Geneva and one at Exeter Change, in which it became necessary to destroy the unfortunate animal.

The engraving below is from a work recently published in London, entitled "Pen and Pencil Sketches of India," by Captain Mundy. The anecdote connected with the sketch furnishes an extraordinary instance of the sagacity of this most wonderful animal.



"By crack sportsmen, the lion is reputed to afford better sport than the tiger: his attack is more open and certain; a peculiarity arising either from the noble nature of the Jungle King, or from the country he haunts being less favourable for a retreat than the thick swampy morasses frequented by the tiger.

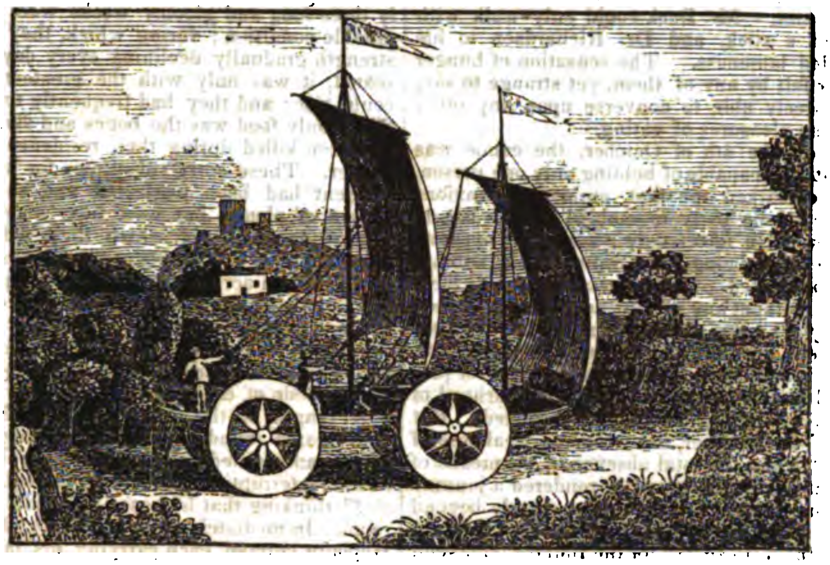
"A gentleman of our party had, perhaps, as perilous an adventure with one of these animals as any one; he having enjoyed the singular distinction of lying for some moments in the very clutches of the royal quadruped. Though I have heard him recount the incident more than once, and have myself sketched the scene, yet I am not sure that I relate it correctly. The main feature, however, of the anecdote, affording so striking an illustration of the sagacity of the elephant, may be strictly depended upon.

"A lion charged my hero's elephant, and he, having wounded him, was in the act of leaning forward in order to fire another shot, when the front of the howdah suddenly gave way, and he was precipitated over the head of the elephant into the very jaws of the furious beast. The lion though severely hurt, immediately seized him, and would doubtless shortly have put a fatal termination to the conflict, had not the elephant, urged by his mahout, or driver, stepped forward, though greatly alarmed, and grasping in her trunk the top of a young tree, bent it down across the loins of the lion, and thus forced the tortured animal to quit his hold! My friend's life was thus saved, but his arm was broken in two places, and he was severely clawed on the breast and shoulders."

From amongst the numerous descriptions of tiger hunts, we select the following:—"At four, P. M. (so late an hour that few of us expected any sport,) Lord Combermere and nine others of our party mounted elephants, and taking twenty pad elephants to beat the covert, and carry the guides and the game, proceeded towards the swamp pointed out as the lurking-place of the buffalo-devouring monsters.

"The Jungle was in no places very high, there being but few trees, and a fine thick covert of grass and rushes. Few of us, however, expecting to find a tiger, another man and myself dismounted from our elephants, to get a shot at a florikan, a bird of the bustard tribe, which we killed. It afterwards proved that there were two tigers within a hundred paces of the spot where we were walking. We beat for half an hour steadily in line, and I was just beginning to yawn in despair, when my Elephant suddenly raised his trunk, and trumpeted, several times, which my Mahout (elephant driver) informed me was a sure sign that there was a tiger somewhere 'between the wind and our nobility.' The formidable line of thirty elephants, therefore, brought up their left shoulders, and beat slowly on to windward.

"We had gone about three hundred yards in this direction, and had entered a swampy part of the jungle, when the long wished for 'Tallyho!' saluted our ears, and a shot from Capt. M. confirmed the sporting *eureka!* The tiger answered the shot with a loud roar, and boldly charged the line of elephants. Then occurred the most ridiculous but most provoking scene possible. Every elephant except Lord Combermere's, (which was a known stanch one) turned tail, in spite of all the blows and imprecations heartily bestowed upon them by the mahouts. One less expeditious in his retreat than the others, was overtaken by the tiger, and severely torn in the hind leg; while another, even more alarmed, we could distinguish flying over the plain, till he quite sunk below the horizon. The tiger, in the mean while, advanced to attack his lordship's elephant, but being wounded in the loins by Capt. M.'s shot, failed in his spring, and sprung back among the rushes. My elephant was one of the first of the run-aways to return to action; and when I ran up alongside of Lord Combermere, (whose heroic animal had stood like a rock,) he was quite *hors du combat*, having fired all his broadside. I handed him a gun, and we poured a volley of four barrels upon the tiger; who attempting again to charge, fell from weakness. Several shots more were expended upon him before he dropped dead; upon which we gave a hearty "whoo! whoop!" and stowed him upon a pad elephant." In our next, we shall introduce the rhinoceros.



THE SAILING CHARIOT.

It would be almost as difficult to assign limits to human ingenuity and invention, as to human ambition. That there are limits which the one cannot pass, while the other is boundless as the imagination itself, will not be denied: but the scientific discoveries of the last half century must make us hesitate before we say such or such a thing is impossible. In mechanics, in chemistry, and in the ingenious branches of the fine arts, improvements and discoveries have succeeded each other with a rapidity which outstretched all anticipation, and have set all calculations at defiance. No man will now dare say to any of these branches of science, "hitherto shalt thou go and no farther."

To be enabled to make the wind, which "bloweth where it listeth," subservient to the purpose of propelling huge vessels on the ocean, and thus to form an intercourse with the most distant parts of the world, was a great triumph of science; but to be able to steer a vessel with a rapidity that the wind does not generally afford in a dead calm, or independent, or even against the wind by steam, is a discovery which would not have been credited a century ago; and other discoveries which were once thought equally improbable have since been made.

The wind, which has been of such good service on the ocean, has for ages been used in machinery on shore, such as the working of mills, &c. Some individuals have, however, thought it might be used to propel vehicles on land. In the last century, Stephinus of Scheveling, in Holland, constructed a chariot on wheels, to be impelled by the wind, the velocity of which was so great, that it would carry eight or ten persons from Scheveling to Putten, a distance of forty-two English miles, in two hours.

Carriages of this kind are said to be frequent in China; and in any wide level country, must be sometimes both pleasant and profitable. The great inconvenience attending the machine is, that it can only go in the direction the wind blows, and even not then unless it blows strong; so that after you have got some way on your journey, if the wind should fail or change, you must either proceed on foot or stand still.

The Hollanders have small vessels, somewhat of this description, which carry one or two persons on the ice, having a sledge at bottom instead of wheels; and being made in the form of a boat, if the ice break, the passengers are secured from drowning.

Our engraving presents a perspective view of Stephinus's Sailing Chariot: the body of it is in the form of a boat; the axle-trees are longer and the wheels further asunder than in ordinary carriages, in order to prevent its being overturned. The body is driven before the wind by the sails, guided by a rudder.

London Mirror.

THE NORTH-WEST PASSAGE.

CAPTAIN FRANKLIN'S FIRST JOURNEY.

On the 1st of October, the wind was still unfavourable for crossing on the raft; and St. Germain, one of the interpreters, now proposed to make a canoe of the fragments of painted canvass in which they wrapped up their bedding. During their detention in the mean while, their sufferings for want of provisions were acute in the extreme. On the afternoon of the first, a small quantity of *tripe de roche* was gathered; and one of the hunters brought in the antlers and backbone of a deer, which had been killed in the summer. "The wolves and birds of prey," says Captain Franklin, "had picked them clean, but there still remained a quantity of spinal marrow which they had not been able to extract. This, although putrid, was esteemed a valuable prize, and the spine being divided into portions, was distributed equally. After eating the marrow, which was so acrid as to excoriate the lips, we rendered the bones friable by burning, and ate them also." The weather became very stormy, and the despair of the Canadians was such, that they refused to gather *tripe de roche*, choosing rather to go entirely without food, than make the slightest exertion to procure it. It is pleasing to observe the contrast which the behaviour of the English seaman, John Hepburn, presented to this despondency. He, "animated by a firm reliance on the beneficence of a Supreme Being, tempered with resignation to his will, was indefatigable in his exertions to serve us, and daily collected all the *tripe de roche* that was used in the officers' mess." Captain Franklin himself was so exhausted, as to be incapable of the most ordinary labour. He attempted to walk three quarters of a mile, to hasten the operations of St. Germain; but after a vain struggle of three hours, during which he was much shaken by the numerous falls he received, he was compelled to return. Mr. Hood had become a perfect shadow, from the severe bowel complaint which the *tripe de roche* invariably gave him. Mr. Back could only walk with the support of a stick, and Dr. Richardson to his weakness added lameness. The sensation of hunger was no longer felt by any of them, yet strange to say, they were scarcely able to converse upon any other subject than the pleasures of eating.

At length, on the 4th of October, the canoe was finished, but it was capable of holding only one person. St. Germain embarked the first, amidst the anxious prayers of the whole party assembled on the beach, for his success. He fortunately reached the opposite shore, and the canoe being then drawn back, another person was transported. In this manner they all were conveyed over without any serious accident; and they were now only 40 miles distant from Fort Enterprise,—the spot where, according to the arrangement with Mr. Wentzel, it had been agreed that a depot of provisions should be laid up, and in the neighbourhood of which a band of Indians should be stationed. But the severity of the weather, the wretched weakness of the whole party, and the total absence of all means of recruiting their exhausted strength, rendered a journey of even this short extent a task almost utterly beyond their powers. Mr. Back was therefore sent forward with three of them, to search for the Indians, and send relief to his starving companions, who were to follow more leisurely. On the day succeeding his departure, they again resumed their journey; but as they advanced, those who were weaker than the rest, and on whom their sole and scanty source of sustenance, (debility, it should be,) the *tripe de roche*, produced the most distressing effects, began to fail altogether. On the second day, "previous to setting out, the whole party ate the remains of their old shoes, and whatever scraps of leather they had, to strengthen their stomachs for the day's journey." In the middle of the march, however, two men dropped behind, utterly unable to proceed, and perished. Dr. Richardson and Mr. Hood now proposed, that they themselves should halt at the first place that offered a supply of *tripe de roche* and firewood, and there remain, while the rest of the party proceeded, and sent back assistance. The plan was adopted, and those two gentlemen remained with Hepburn, who volunteered to stop behind also. The separation took place on the 7th of October, while they were yet 24 miles from Fort Enterprise. Captain Franklin continued his journey with the remainder of the party, consisting of eight persons; but before three days had elapsed, four of them, including one named Michel, an Iroquois, failed in their strength, and returned to join Dr. Richardson and Mr. Hood.

On the evening of the 11th, the Captain, with the others, reached the Fort, in an utterly exhausted state, having tasted no food for five days, with the single exception of one meal of *tripe de roche*. Their feelings may more easily be conceived than described, when, on entering, instead of finding food and succour, and every means of calm repose and rest for their wearied bodies, they beheld "a perfectly desolate habitation!" "There was no deposit of provisions, no trace of the Indians, no letter from Mr. Wentzel, to point out where they might be found." When they had somewhat recovered from the first shock of so dreadful a disappointment, they observed a note in the handwriting of Mr. Back, stating that he had reached the house two days before, and that he had gone in search of the Indians in a direction where one of the guides thought it likely they would be, and that he would send relief the instant he met them.

Four days afterwards, a message arrived from Mr. Back, with the unwelcome tidings, that he had as yet been unsuccessful. Captain Franklin now made a last effort, and collecting some old shoes, scraps of leather, and skins with the hair singed off, set out himself in quest of the Indians; but his strength was unequal to the task, and he returned again to the house of misery and desolation on the following day. Nearly three long and gloomy weeks were passed in this pitiable condition; during which, they perceived their strength gradually declining every day. When once seated, it was only with the greatest difficulty they could rise; and they had frequently to lift each other. [illegible] only food was the bones and skins of deer, that [illegible] been killed during their residence the preceeding winter. These sorry substitutes for wholesome nourishment had been neglected and cast away in the season of plenty, but were now sought for with the utmost eagerness of which their debilitated frames were capable. The bones were pounded and boiled down into an acrid mess, which they persuaded themselves to call soup, until the insides of their mouths became so sore from eating it, that they were compelled to relinquish its use. The skins they at first fried, but afterwards boiled, finding this to be the more palatable mode of dressing them.

At length, on the evening of the 29th, whilst they were seated round the fire, conversing on the subject of the anticipated relief, one of the hunters, with a sudden interruption, joyfully exclaimed, "*Ah! le monde!*" thinking that he heard the Indians in the other room. Immediately afterwards, Dr. Richardson and Hepburn entered, each carrying his bundle; but they were alone—none of their companions were with them. Captain Franklin was instantly seized with fearful apprehensions respecting his friend Hood, which were immediately confirmed by the Doctor's melancholy communication, that both that gentleman and Michel were dead: the details were, however, spared for the present. "We were all shocked," says Captain Franklin, "at beholding the emaciated countenances of the Doctor and Hepburn, as they strongly evidenced their extremely debilitated state. The alteration in our appearance was equally distressing to them, for since the swellings had subsided, we were little more than skin and bone. The Doctor particularly remarked the sepulchral tone of our voices, which he requested us to make more cheerful, if possible, unconscious that his own partook of the same key."

At this moment, Hepburn had succeeded in shooting a partridge, which was brought to the house. "The Doctor tore out the feathers, and having held it to the fire a few minutes, divided it into seven portions. Each piece was ravenously devoured by my companions, as it was the first morsel of flesh any of us had tasted for thirty-one days, unless, indeed, the small grisly particles which we found occasionally adhering to the pounded bones may be termed flesh."

Dr. Richardson now proceeded to give an account of what had befallen him and his party since the separation; and melancholy indeed was the tale which he had to relate. On the first two days, they had nothing whatever to eat; on the evening of the third, Michel arrived, and brought with him a hare and a partridge, which enabled them to break their long fast. This individual, it will be recollected, was one of the four who had turned back, and left Captain Franklin, for the purpose of rejoining Dr. Richardson and Mr. Hood. But he alone reached them; the other three were never heard of more. On the 11th, Michel was absent; when he returned, he stated that he had been engaged in an unsuccessful hunt after deer, yet that he had found a wolf which had been killed by the stroke of a deer's horn; and had brought a part of it. "We implicitly believed this story then," says Dr. Richardson, "but afterwards became convinced, from circumstances, the detail of which may be spared, that it must have been a portion of the body of Belanger or Perrault," two of the unfortunate men who had turned back, and one or both of whom, it was strongly suspected, had been murdered by this Iroquois. The conduct of this man now became daily more gloomy and alarming; he absented himself from the party, refused either to hunt or to fetch wood, and frequently threatened to leave them. Poor Hood was rapidly fading; his strength was nearly gone; and the acute pain which the *tripe de roche* invariably caused whenever he ate it, deprived him of even this their last resource against starvation. They avoided speaking upon the sorrowful subject of their hopeless condition; their minds had decayed with the strength of their bodies, and they could no longer bear to contemplate the horrors that surrounded them. "Still," says Dr. Richardson, "we were calm, and resigned to our fate; not a murmur escaped us, and we were punctual and fervent in our addresses to the Supreme Being."

But an event soon occurred which effectually roused them, and caused a sudden exertion of their remaining powers. Michel was daily becoming more sulky, and his unwillingness to assist the others at last amounted to positive refusal. Mr. Hood attempted to remonstrate with him, but only excited his anger. "It is no use hunting; there are no animals; you had better kill and eat me," was one of the answers which he returned. Dr. Richardson and Mr. Hood had already promised that if he would hunt for four days diligently, they would then allow him to proceed to Fort Enterprise with Hepburn, who should be furnished with a letter from Captain Franklin, a compass, and instructions for performing the journey. The 21st was the day appointed for the departure. On the 20th, they again urged him to go a hunting, that he might, if possible, leave them some provisions before quitting them; but he showed great unwillingness to go out, and lingered about the fire, under the pretence of cleaning his gun. After the morning service had been read, Dr. Richardson went out to gather *tripe de roche*; Hepburn was employed in endeavouring to provide them a store of fuel previous to his departure; and Mr. Hood was left sitting by the fire-side before the tent, arguing with Michel.

"A short time after I went out," says Dr. Richardson, "I heard the report of a gun, and about ten minutes afterwards, Hepburn called to me, in a voice of great alarm, to come directly. When I arrived, I found poor Hood lying lifeless at the fire-side, a ball having apparently entered his forehead. I was at first horror-struck with the idea that, in a fit of despondency, he had hurried himself into the presence of his Almighty Judge by an act of his own hand; but the conduct of Michel soon gave rise to other thoughts, and excited suspicions, which were confirmed when, upon examining the body, I discovered that the shot had entered the back part of the head, and passed out at the forehead, and that the muzzle of the gun had been applied so close as to set fire to the night-cap behind."—"*Bickersteth's Christian Help* was lying open beside the body, as if it had fallen from his hand, and it is probable that he was reading it at the instant of his death." Michel was immediately questioned as to the manner of the occurrence, but his answers were unsatisfactory in the extreme. He was still the strongest and the best armed of the three survivers, and Dr. Richardson dared not, therefore, give open vent to his suspicions; but the repeated avowals of the Iroquois that he was innocent, and his frequent protestations that he was incapable of committing such an act, too clearly betrayed a secret consciousness of guilt. The body was removed into a clump of willows behind the tent, and when the party had returned to the fire, the funeral service was read in addition to the evening prayers.

They now determined to remain no longer where they were, but to proceed directly to the fort. A portion of the buffalo robe which had belonged to Mr. Hood afforded them an acceptable meal of boiled skin for the relief of their present necessities; and the remainder supplied them with scanty morsels during the journey which followed. As they advanced, the conduct of Michel became more alarming and outrageous than ever; his ill-nature vented itself in mutterings of obscure hints and threats; and the insolent tone of superiority which he now assumed, when addressing Dr. Richardson, plainly showed that he considered both that gentleman and Hepburn to be within his power. The gloomy conviction now forced itself on their minds, that he would attempt to destroy them on the first opportunity that offered. That he had hitherto abstained from putting his murderous schemes into execution, was to be attributed to a natural regard for his own safety, which taught him that to despatch his intended victims while he yet needed their assistance in guiding him to a place of relief, [illegible] but to ensure his own destruction. Proceeding [illegible] their journey, they came in the afternoon to a rock on which there was some *tripe de roche*; here Michel halted, and said that he would gather it whilst the others went on, and that he would soon overtake them. "Hepburn and I," says Dr. Richardson, "were now left alone, for the first time since Mr. Hood's death, and he acquainted me with several material circumstances which he had observed of Michel's behaviour, and which confirmed him in the opinion that there was no safety for us except in his death, and he offered to be the instrument of it. I determined, however, as I was thoroughly convinced of the necessity of such a dreadful act, to take the whole responsibility upon myself; and immediately upon Michel's coming up, I put an end to his life, by shooting him through the head with a pistol."

After the death of Michel, the two survivors continued their march towards the Fort; and six wretched and weary days did they drag along their famished bodies, before they could traverse the short space that separated them from that spot. At length, on the evening of the 29th, they arrived in sight of it; "and it is impossible," says Dr. Richardson, "to describe our sensations, when, on attaining the eminence that overlooks it, we beheld the smoke issuing from one of the chimneys."

Such was the tragical story that Dr. Richardson had to tell, on rejoining his unhappy companions in misery. But his sufferings were not at an end: he had, indeed, reached the Fort, but only to find how fruitless were all the hopes of relief which he had so securely built upon that event. The party now assembled consisted of six persons; our three countrymen and three Canadians. Scarcely two days had elapsed, when their number was reduced to four, by the death of two of the Canadians: and before the lapse of a week, the remainder were in such a state that they could not have survived eight and forty hours longer: providentially, however, on the 7th of November, the long expected aid arrived, by the hands of three Indians, whom Mr. Back had sent with all possible expedition, as soon as he had reached their encampment. Dr. Richardson and Hepburn had gone out to cut wood, leaving Captain Franklin occupied in endeavouring to dispel the gloomy apprehensions of approaching death which disquieted the only Canadian who was now left. They had hardly begun their labour, when they were amazed at hearing the report of a musket. They could scarcely believe that there was really any one near, until they heard a shout, and immediately espied three Indians close to the house. "Adam and I," says Captain Franklin, "heard the latter noise, and I was fearful that a part of the house had fallen upon one of my companions, a disaster which had, in fact, been thought not unlikely. My alarm was only momentary: Dr. Richardson came in to communicate the joyful intelligence that relief had arrived. He and myself immediately addressed thanksgiving to the Throne of Mercy for this deliverance, but poor Adam was in so low a state, that he could scarcely comprehend the information."

We have now little to add respecting the further proceedings of the expedition. After a sufficient stay at Fort Enterprise to enable them to recover in some degree their strength, the party proceeded to Fort Providence, where they remained during the winter. In the following summer, they set out on their return to England, which they reached safely in the month of October, 1822.

The result of this expedition may be briefly said to consist in the discovery and examination of a detached slip of the northern coast of America, extending in length for nearly six and a half degrees of longitude.

VILLAGE IN THE VALLEY OF ADJELOON.

We halted at the house of a Christian Arab at Adjeloon; and as our host, Yakoobe, had come with us from Curfr Injey thus far, the priest of the village called together all the Christians who were in the neighbourhood to meet us. It appeared that at Curfr Injey there were only four Christians among all its inhabitants, at Anjerah ten, at Ain-Jerrah fifteen, and at this place, Adjeloon, twenty. They have a small room here which is appropriated to worship, and on Sundays and feast days they have the occasional visits of the other villagers to add to their congregation. There are about 400 inhabitants in each of the three former villages, and 200 in this, which however must have been once the largest place of the whole, judging from the extent of the ruined dwellings around it, and particularly on its northern side.

We left Adjeloon about ten o'clock, and after ascending a narrow valley to the northward, inclining easterly, entered into a fine forest of sijan trees, where, after an hour's journeying, we passed over a spot covered with the vestiges of former buildings, walls, and streets, though now entirely overgrown with shrubs and trees. This spot is called by the people of the country Bel-led-el-Yosh, or the country or place of Joshua, probably referring to that leader's bidding the sun to stand still upon Gibeon, and the moon in the valley of Ajalon (Josh. x. 12;) this valley of "Adjeloon," as it is now pronounced, through which we had come, and on the skirts of which the ruins spoken of are placed, being undoubtedly the same with the valley of Ajalon named in the scriptures.—*Buckingham's Travels among the Arab Tribes.*

In excavating the Lancaster Lateral Canal near a place called the "Deep Cut," bones of extraordinary dimensions have been discovered. Among the curiosities found is a horn six feet in length, weighing 44 lbs. and measuring in the circumference at the butt end sixteen inches. Also, a tooth weighing 6 3-4 lbs.

The first newspaper in England was published on the 27th of May, 1576. This was the Liverpool Times, which is published at the present day.

POETRY.

From the Liverpool Mercury.

SLAVERY.

From western India's fertile soil,
  Before th' eternal throne,
Sigh'd out by thousands as they toil,
  Ascends the negro's groan

Beyond the Andes' snowy bound,
  In rich Potosi's mines,
Immur'd beneath the cavern'd ground,
  The wretched bondsman pines.

And when the dark Levantine wave
  Assails the Lybian shore,
In bitter toil the galley slave
  Still labours at the oar.

From every clime beneath the skies
  Profan'd by slavery's chain,
The prayers of captive millions rise,
  And shall they plead in vain?

Shall man, of little power possess'd,
  His fellow worm enthral?
And rudely from his brother wrest
  A blessing—given to all?

Yes! thus it is: yet not unpaid
  His tyranny prevails;
And all his barbarous deeds are weighed
  In heaven's unerring scales.

And when the dark and silent grave
  Its gloomy jaws shall close,
And the stern master and his slave
  Alike in dust repose;

Each bursting sigh, each bitter tear,
  Each bosom's tortured beat,
Shall then in black array appear
  Before the judgment seat.

Then tremble, tyrant of the day,
  And shudder at thy doom,
For know, vain man, thy little sway
  Is ended in the tomb.

That home the wretched slave implores,
  A tenement of rest,
That leads him to those smiling shores—
  The Island of the blest.

☞ REMOVAL.

The office of the Family Magazine is removed to No. 45 Ann street, near William.

☞ Subscribers are requested to report any delinquency on the part of our carriers, at the office.

OUR FIRST VOLUME

Is now bound and ready for sale. Price $2. Unbound, $1 50.

DIPPING NEEDLE.

The magnetical needle so duly poised about an horizontal axis, that, besides its direction towards the pole, it will always point to a determined degree below the horizon. The dipping needle was invented by Robert Norman, a compass maker at Ratcliffe, about the year 1580, and arose, according to his own account of the matter, from the following circumstance:—It was his custom to finish and hang the needles of his compasses before he touched them, and he always found, after the touch, the north point would dip or decline downward, pointing in a direction under the horizon; so that to balance the needle again, he was always forced to put a piece of wax on the south end, as a counterpoise. After having observed this effect frequently, he was at length led to mark the quantity of the dip, or to measure the greatest angle which the dip would make with the horizon; he found at London it was 71° 50′, but by subsequent experiments the dip is found to decrease about 1′ 4″ every year.

SECTION V.

HISTORY.

CHALDEA.

Next to China, Chaldea may be considered as entitled to the precedence in the history of nations. It was here, as we have seen, that, to say the least, the principal portion of the more immediate descendants of Noah fixed their abode before the Dispersion. It was here that the famed Babel was erected, and monarchy began. Here it was that the mighty Nimrod figured, by founding the first Post-diluvian cities, and organizing an empire which ultimately became, and continued for a season, the mistress of the world. Well may this country, then, claim priority, on the historic page, to all others, with the single exception already made.

In the case of Chaldea, we are able to trace its history, in the clearest manner, to its origin. It is not, like that of some countries, enveloped in the mists of fable. We are made acquainted with its first inhabitants, its first monarch, and its earliest events; which furnish us a clue to its entire history, and to that of many other nations. Strike from the annals of the world the infantile period of Chaldean history, and you break a most important link in the great historical chain of nations, and involve the story of our race in the utmost confusion conceivable. The historian may therefore well congratulate himself, that he is so thoroughly furnished with the materials necessary to the clear elucidation of so important a period.

Babylon, the capital of Chaldea, was originally denominated Babel. And it is observable, that it was not a tower alone, but a city also, which men built prior to the Confusion. "Go to," said they, "let us build us a *city* and a *tower* whose top may reach unto heaven." Gen. xi. 4. This city, we say, which was afterwards denominated Babylon, was at first called Babel.

After the Dispersion, it would seem that Nimrod, extending his views of empire beyond the limits of this city, founded three other cities, viz. Erech, Accad, and Calneh, all in the land of Shinar; which cities, it is supposed, he governed by deputies. Cush, his father, is thought to have been deputy or governor at Erech.[*] Nimrod's empire probably extended no further than the province of Babylonia. According to some, he commenced his reign A. M. 1758, but we are inclined to think it was not so early; for this is fifty years earlier than there is good reason for believing that the building of Babel began. Allowing, therefore, that his empire commenced with the founding of Babel, it was not, according to the calculation just made, till A. M. 1807. The argument for an earlier date derived from the circumstance that Peleg, who received his name from the fact that in his days the earth was divided, was born in 1757, will appear of very little weight when it is considered, that various individuals in olden times received their names in allusion to events future at the time of their birth. Noah is an example of the kind. Indeed, in the very case of Peleg himself, we are led to the conclusion that he was named on the same consideration. *In his days*, not *at his birth*, was the earth divided.

Nimrod is supposed to have died A. M. 1905. If, therefore, it be admitted that his kingdom began A. M. 1807, his reign amounted to ninety-eight years. On the other supposition, he must have reigned one hundred and forty-eight years.

Some writers make Belus and Nimrod the same; while others make them different individuals, and say that Belus was Nimrod's successor. Belus, like Nimrod, seems to have been selected by the people as their sovereign on account of his pre-eminent talents. According to Pliny, he was the inventor of the Chaldean astronomy.[*] He was of a studious turn, and sought the intellectual improvement of his people. He is said to have reigned sixty years, and to have died, A. M. 1966.

Sometime after the death of Belus, Ninus, the king of Assyria, invaded Babylonia, and deposed its monarch, Nabonius, thereby rendering it a mere province of the Assyrian empire, thus merging the two kingdoms in one.

Before we proceed further, we will turn our attention to

ASSYRIA.

The founder of this empire, as we have heretofore seen, was Asshur, a son of Shem, who emigrated from Babylonia for that purpose. He pursued a course very similar to that of Nimrod in establishing his empire. First he built Nineveh, the capital. Then he built three other cities, viz. Rchoboth, Resen, and Calah; governing them no doubt by deputies, after the manner of Nimrod. He is supposed by some to have died about the same time as Nimrod, though we cannot conceive how this supposition can be reconciled with the date of the events of those times, unless Belus and Nimrod were the same.

The successor of Asshur was Ninus, the conqueror of Babylonia, whom we mentioned a little back. He was possessed of an ambitious spirit, and was the first warrior and conqueror noted on the historic page.[†] His first conquest was that of Babylonia, his mother country, whence emigrated the first settlers of Assyria. This conquest he easily effected, the Babylonians having till then been occupied in cultivating the arts of peace. Diodorus Siculus[‡] makes particular mention of this conquest. "Ninus, the king of Assyria," says he, "assisted by a king of the Arabians, invaded the Babylonians with a powerful army. The present Babylon was not then built, but there were in the country of Babylonia other cities of figure. He easily reduced these his neighbours, who had no great skill in war, and laid them under tribute." And thus, about 120 years after the founding of the Assyrian colony by Asshur, they became sufficiently powerful to subdue the land of their ancestors.

The success of Ninus in his first attempt inspired him with increased confidence in his own strength, and prompted him onward to more extensive conquests. In a few years, he overran many of the infant states of Asia. The subjugation of one nation led him on to that of another; and thus went he on from conquest to conquest, till he reached the far distant regions of Bactria, the country where we have supposed those who remained with Noah first to have settled, and which, as might be expected from this circumstance, was more populous and formidable than those countries which were settled subsequently, and which Ninus had previously overcome. Here he met with serious opposition—far more so than he had before realized. After several ineffectual attempts upon the capital, he at length, by means of the contrivance and conduct of Semiramis, wife of Menon, a captain in his army, succeeded in its capture. Charmed with her bravery and skill, he took her from her husband, and made her his queen, offering him his own daughter in her stead. According to others, the husband of Semiramis destroyed himself, from fear or jealousy of Ninus, before the latter married her. By Semiramis, Ninus had a son named Ninyas. Ninus reigned 52 years, and is computed to have died A. M. 2017.

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[*] Hyde. Rel. vet. Pers. p. 40.

[*] Pliny l. vi. c. 26.

[†] l. i. c. 1.

[‡] Diodorus Siculus, l. ii.

On the death of Ninus, Semiramis assumed the reins of government. She removed the seat of empire to Babylon, which now again became the chief of cities, and the capital of the world. This city she strengthened, enlarged, and embellished at a vast expense. It is asserted that in making these improvements, she employed the labours of 2,000,000 men—a number, however, altogether incredible, considering the early period in which she lived, and the paucity of mankind in those days. And yet, when we consider her great resources; when we reflect that nations were subservient to her beck, and that she swayed the sceptre of a large portion of the inhabited earth; we are led at once to the conclusion, that she had a vast multitude employed in the work under consideration.

Having completed this magnificent undertaking, and rendered Babylon, at this early period, the "glory of kingdoms," she raised a powerful army, and after making some minor conquests, proceeded to the East, for the purpose of completing what her husband had begun—the subjugation of that part of the world. But contrary to her expectations, she found the people in that quarter too powerful for her arms; and after a long and disastrous war, she was compelled to relinquish her enterprise, and to witness the prostration of all her high hopes in the dust. Some authors assert that she was slain on the banks of the Indus; but according to others, she returned in disgrace to Babylon, and resigned her crown to her son Ninyas, after a reign of 42 years; shortly after which she died.*

Ninyas her successor was very unlike his parents. He indulged in no ambitious schemes of conquest, but devoted his attention to the welfare of his people, and to the proper regulation of the extensive empire whose destinies he was called to wield. It was on account of this pacific temperament of Ninyas, that some historians have stigmatized him with effeminacy and imbecility. But well had it been for mankind, had there been more of *such* effeminacy and imbecility, and less of turbulence and ambition, in the management of the political concerns of nations.

MYTHOLOGY.

THE MUSES.

(Concluded.)

"Bahusius, a modern poet, has comprised the names of all the muses in a distich; that is, he has made nine Muses stand, which is something strange, but upon eleven feet. Perhaps you will remember their names better, when they are thus joined together in two verses:

Calliope, Polymneia, Erato, Clio, atque Thalia,
Melpomene, Euterpe, Terpsichore, Urania.

"The most remarkable of the names which are common to them all are: Heliconide, or Heliconiades, from the mountain Helicon, in Bœotia. Parnassides, from the mountain Parnassus, in Phocis, which has two heads, where if any person slept, he presently became a poet. It was anciently called Larnassus, from Larnace, the ark of Deucalion, which rested here, and was named Parnassus after the flood, from an inhabitant of this mountain, so called. Citherides, or Citheriades, from the mountain Citheron, where they dwelt. Aonides, from the country Aonia. Pierides, or Pieriæ, from the mountain Pierus, or Pieria, in Thrace; or from the daughters of Pierius and Annippe, who daring contend with the Muses were changed into pies. Pegasides and Hippocrenides, from the famous fountain Helicon, which by the Greeks is called Hippocrene, and by the Latins, Caballinus, both which words signify the horse's fountain: it was also named Pegasus, the winged horse, which, by striking a stone in this place with his foot, opened the fountain, and the waters became vocal. Aganippides, or Aganippeæ, from the fountain Castalius, at the foot of Parnassus.

"Some write, that there were but three in the beginning; because sound, out of which all singing is formed, is naturally three-fold; either made by the voice alone, or by blowing, as in pipes, or by striking, as in citherns or drums. Or it may be, because there are three tones of the voice or other instruments, the bass, the tenor, and the treble. Or lastly, because all the sciences are distributed into three general parts, philosophy, rhetoric, and mathematics; and each of these parts is subdivided into three other parts; philosophy into logic, ethics, and physics; rhetoric into the demonstrative, deliberative, and judicial kind; mathematics into music, geometry, and arithmetic: and hence it came to pass, that they reckoned not only Three Muses, but Nine.

"Others give a different reason why they are Nine. When the citizens of Sicyon appointed three skilful artificers to make the statues of the Three Muses, promising to choose those three statues out of the nine which they liked best, they were all so well made that they could not tell which to prefer; so that they bought them all, and placed them in the temples; and Hesiod afterwards assigned to them the names mentioned above.

"Some affirm that they were virgins, and others deny it, who reckon up their children. Let no person, however, despise the Muses, unless he design to bring destruction upon himself by the example of Thamyras or Thamyris; who, being conceited of his beauty and skill in singing, presumed to challenge the Muses to sing, upon condition that if he was overcome, they should punish him as they pleased. And after he was overcome, he was deprived at once both of his harp and his eyes."

THE GRACES.

"The Graces were three beautiful females, daughters of Venus, and often attendant upon her. They were supposed to be beautiful and amiable, and to represent the sweetness, civility, and purity which are proper to delicate, elegant, and accomplished persons.

"The names of the Graces were Algaia, Thalia, and Euphrosyne; they are usually represented in a group, naked and adorned with flowers on their heads. The *Graces*, properly Charities or Virtues, were represented hand in hand, to show that virtues, though different, belong to each other, and they are not found single but united. They were *beautiful*, to signify that kind affections and good actions are pleasing and winning. They were exhibited unadorned and unclothed, because gentleness of manners and kindness of heart are sufficient without disguise or art to gain good will.

Some assert that they were the daughters of Jupiter and Eurynome or Eunomia, the daughter of Oceanus. Antimachus says they were born of Sol and Ægla. Others think they were daughters of Eteocles, and were therefore called Eteocleæ. Their three names, as individuals, viz. Aglaia, Thalia, and Euphrosyne, signify respectively, the Shining, the Flourishing, the

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* Diodorus Siculus, lib. ii.

Gay. Besides these, they had other names. They were anciently represented dressed; and the practice of representing them naked finally obtained on the consideration, that the true graces are the workmanship of nature, and are not derived from the ornaments of art.

THE NORTH-WEST PASSAGE.

CAPTAIN FRANKLIN'S SECOND JOURNEY.

Although Captains Parry and Franklin both left England with their respective expeditions about the same period in the year 1819, yet the former of these gentlemen returned considerably the earlier, and had already been gone nearly eighteen months on a second enterprise, when the other arrived from the first. Scarcely a year had, however, elapsed before Captain Parry returned, in the autumn of 1823, from this second voyage, in which he had vainly endeavoured to penetrate the icy channel named the Strait of the Fury and Hecla. Towards the close of the same year, the Government made known its intention of sending that active navigator to engage in a third attempt; and then Captain Franklin laid before them a plan for another co-operative expedition over land to the shores of the Polar Sea, for the conduct of which he offered his own services. The proposal was accepted, and every arrangement made for carrying it into immediate effect. Dr. Richardson solicited permission again to accompany his friend, which was readily accorded; and the party was completed by the appointment of their old fellow-traveller, Lieutenant Back, with Mr. Kendall, Mr. Drummond as assistant botanist, and four marines. Captain Franklin was directed, by his instructions, to winter at the Great Bear Lake, and thence proceed, in the following spring, down the Mackenzie River, (which was explored by the traveller of that name in 1789.) On reaching its mouth, the expedition was to separate into two parties; the one to trace the coast to the westward, and the other to survey it to the eastward, as far as the Coppermine River.

The necessary boats and stores were forwarded in the summer of 1824 to York Factory, and thence despatched by the ordinary river-navigation towards the Great Bear Lake. The officers left England early in 1825, and proceeding by the more circuitous but more convenient route of New York and Canada through Lake Huron, overtook the boats on the Methye River in the summer of the same year. By the 5th of August, the whole party had reached the Great Bear Lake River, which flows from the lake of that name into the Mackenzie River; and on its banks Captain Franklin resolved to take up his winter-quarters. They quickly began to build a habitation and store, which they afterwards named from their respected commander; and while the most skilful were thus engaged, he himself proceeded down the Great Bear Lake and Mackenzie Rivers, in order to take a view of the Polar Sea, and obtain information which would probably serve to guide in some degree his operations the following year. In this excursion he was eminently successful; and he rejoined his companions on the 5th of September.

The winter was passed in the usual manner; and with the return of spring the party began to prepare for their expedition. On the 28th of June they quitted Fort Franklin, descended the Mackenzie, and, on the 4th of July, separated into the two branches which were to pursue different directions, following the two channels into which the stream here divided. Captain Franklin conducted the western party, and Dr. Richardson the eastern. The former had scarcely reached the sea, when they fell in with a large number of Esquimaux, with whom, but for their own forbearance, they would have been involved in a bloody, and perhaps fatal encounter. Having extricated themselves from this imminent peril, they continued their course, greatly impeded, however, by the unfavourable state of the atmosphere. The low and swampy land that here extends between the northern termination of the rocky mountains and the sea coast, seems to be productive of a constant fog, frequently so dense as to contract the range of view to within a few yards. Nevertheless, by the 16th of August they had succeeded in reaching the half-way point between Mackenzie River and Icy Cape, (the furthest point to which the north-western coast of America had been traced from Behring's Strait;) but the symptoms of approaching winter here became so unequivocal, that they were compelled to return, though with great reluctance. Unfortunately, Captain Franklin did not know that at this moment the barge of the ship, which had been sent to await his arrival in Behring's Strait, was actually within 160 miles of the spot which he had himself reached; had he known it, "no difficulties, dangers, or discouraging circumstances," to use his own expression, would have prevailed on him to return. Under the existing circumstances he was obliged to do so, and, on the 21st of September, this western expedition reached Fort Franklin, where they found the eastern branch returned before them.

The navigation which Dr. Richardson had to perform was almost wholly unobstructed; and between the 4th of July and the 8th of August, he succeeded in accomplishing the coast voyage of 902 miles, between the mouths of the Mackenzie and Coppermine Rivers. He returned with his party to Fort Franklin on the 1st of September, and, after a lapse of nearly three weeks, was joined by the western branch, as we have before related. In the following year, the two parties set out in company for England, which they reached in the autumn of 1827.

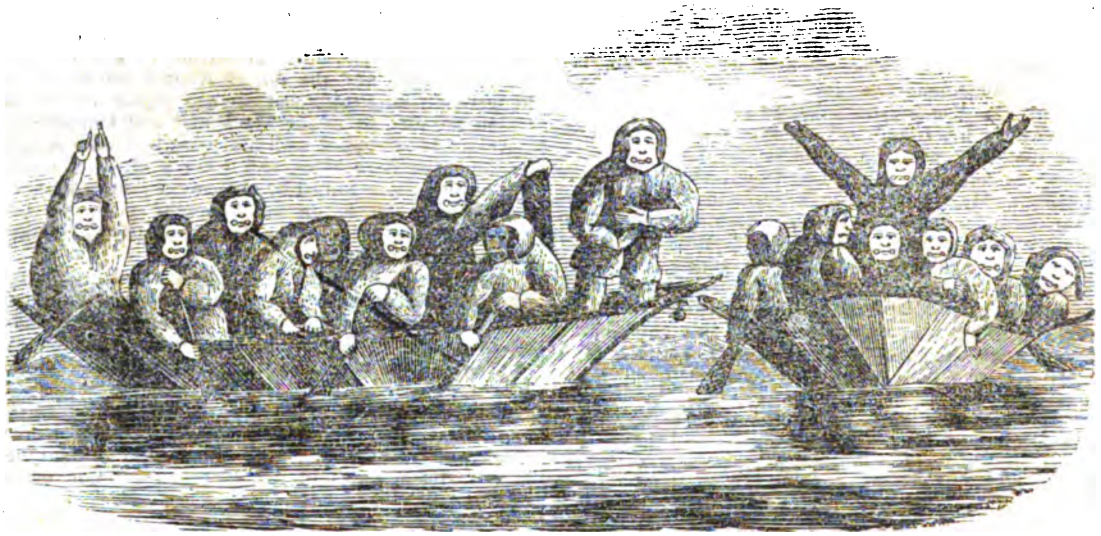
This second expedition of Captain Franklin, though destitute of that tragic interest which his first excited, may be regarded as more important in its geographical results. The 6½ degrees of longitude, for which the northern shores of America had been explored in the former enterprise, were now extended to a line exceeding 30½ degrees in length, and approaching on the one side to within 160 miles of the extreme known north-western point of that continent, and on the other to within 400 miles of the supposed extreme north eastern point.

VOYAGE OF CAPTAIN BEECHEY.

When the simultaneous expeditions of Captains Parry and Franklin were undertaken in 1824, it appeared to those with whom they originated, to be almost impossible that either of them, even in the event of success, could reach the open sea in Behring's Strait, without being nearly, if not wholly, exhausted of resources and provisions, and it was quite certain that Captain Franklin's party would be entirely destitute of the means of conveyance to Europe. Accordingly, to obviate these anticipated difficulties, His Majesty's Government determined upon sending a ship to that spot, to await the arrival of the two expeditions. The *Blossom* sloop was selected for this purpose, and the command of her given to Captain F. W. Beechey, who had already distinguished himself in the preceeding northern voyages. Before the departure of Captain Franklin, he arranged with Captain Beechey the plan of their joint operations. Kotzebue Inlet was agreed upon as the place of rendezvous, where Captain Beechey was to remain during the summer months of 1826 and 1827.

The Blossom sailed from England on May 19th, 1825; and passing Behring's Strait, entered Kotzebue Sound early in the morning of the 22nd of September The land was much obscured by a thick fog, which, however, cleared off soon afterwards, and discovered to their astonished view a deep inlet in the northern shore, that had escaped the observation of Captain Kotzebue. Captain Beechey named it *Hotham Inlet*, and sent the barge to examine it, intending to proceed with the ship further into the sound, as far as Chamisso Island, the appointed place of rendezvous. The unfavourable state of the wind prevented him from advancing for nearly two days. During his detention, a party of the natives approached the ship, in their baidars, bringing with them various articles of skin and fish, which they were desirous of changing for other commodities. The baidars are a species of boat, similar in construction to the Esquimaux oomiaks (or woman boats) of Hudson's Bay. "They consist," says Captain Beechey, "of a frame made from drift wood, covered with the skins of walrusses strained over it, and are capable of being tightened at any time by a lacing on the inside of the gunwale; the frame and benches for the rowers are fastened with thongs, by which the boat is rendered both light and pliable; the skin, when soaked with water, is translucent; and a stranger placing his foot upon the flat yielding surface at the bottom of the boat, fancies it a frail security; but it is very safe and durable, especially when kept well greased." Each of these boats now contained from ten to thirteen men, who all exhibited the custom, which was afterwards found to be general along this part of the American coast, of wearing ornaments in their under lip. These consisted of pieces of ivory, stone, or glass, formed with a double head, like a sleeve-button, one part of which is thrust through a hole bored in the under lip. The incision is made when about the age of puberty, and is at first about the size of a quill; as they grow older, the natives enlarge the orifice, and increase the size of the ornament accordingly, that it may hold its place. In adults, this orifice is about half an inch in diameter, and will, if required, distend to three quarters of an inch.

The people themselves possessed all the characteristic features of the Esquimaux;—large, fat, round faces, high cheek bones, small hazel eyes, eyebrows slanting like the Chinese, and wide mouths. The engraving of them below is from Captain Beechey. They were strictly honest; and in this respect offer rather a contrast to others of their race, whom Captain Beechey subsequently visited.



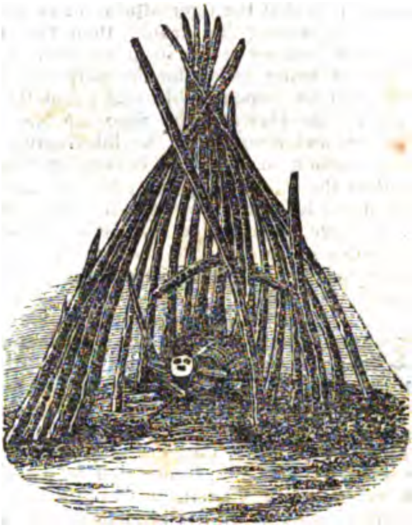
WESTERN ESQUIMAUX OF HOTHAM INLET, IN THEIR BAIDARS.

Red and blue beads, buttons, knives, and hatchets, were in general request, and readily induced them to sell their ordinary commodities; but *tawac*, as they called our tobacco, was the great object of the men's desires, and an offer of this made them part with even their bows and arrows, which they had refused to barter for the usual articles of exchange. Their habits seemed to be very filthy; but they were hospitable, though after their own fashion. Whenever Captain Beechey visited them, he was received in the most friendly manner; and frequently, to use his own expression, "underwent the full delights of an Esquimaux salutation." A contact of noses, or a smoothing of the visiters' faces with hands, which had been previously licked and applied to their own, was the usual mode of reception; and sometimes, as a most especial mark of regard, a warm embrace and hug supplied the place of this less distinguished favour. The choicest delicacies which their means could afford, were then offered; but the guests, with a squeamishness that excited at once the surprise and ridicule of their less scrupulous hosts, could never be prevailed upon to accept the dainty fare. Bowls of blubber and walrus flesh, dishes of whortleberries mashed up with sorrel and rancid train-oil, were left untouched by our fastidious countrymen; the entrails of a fine seal, and a bowl of coagulated blood, shared a similar fate; and even "the raw flesh of the narwhal, nicely cut into lumps, with an equal distribution of black and white fat," displayed its tempting charms in vain. One gentleman only, and he to oblige the Captain, ventured to taste one of the motley mixtures, but at the expense of his appetite for the rest of the day.

It was not till the morning of the 25th of July, that Captain Beechey reached Chamisso Island, only five days later than had been agreed upon by Captain Franklin and himself. No traces of the latter gentlemen were yet to be seen; and Captain Beechey therefore proceeded, according to the arrangement, to survey the coast further to the northward, towards the Arctic Sea. At the same time, in order that Captain Franklin might not want provisions, in the event of his missing the ship along the coast, and arriving at the island in her absence, a tight barrel of flour was buried in the most unfrequented spot in its vicinity, and directions for finding it were deposited in a bottle, to which attention was directed by writing upon the cliffs with white paint. By the middle of August he reached Icy Cape, where he found the sea quite open, and felt the greatest desire to advance. His instructions were, however, positive, to avoid the chance of being beset with his ship in the ice; and he was obliged therefore to content himself with despatching the barge to prosecute the further search, while he returned to Kotzebue Sound. The barge proceeding to the north-eastward succeeded in exploring the line of the coast as far as point Barrow, 126 miles beyond Icy Cape; and the crew having erected a post for Captain Franklin returned to the ship.

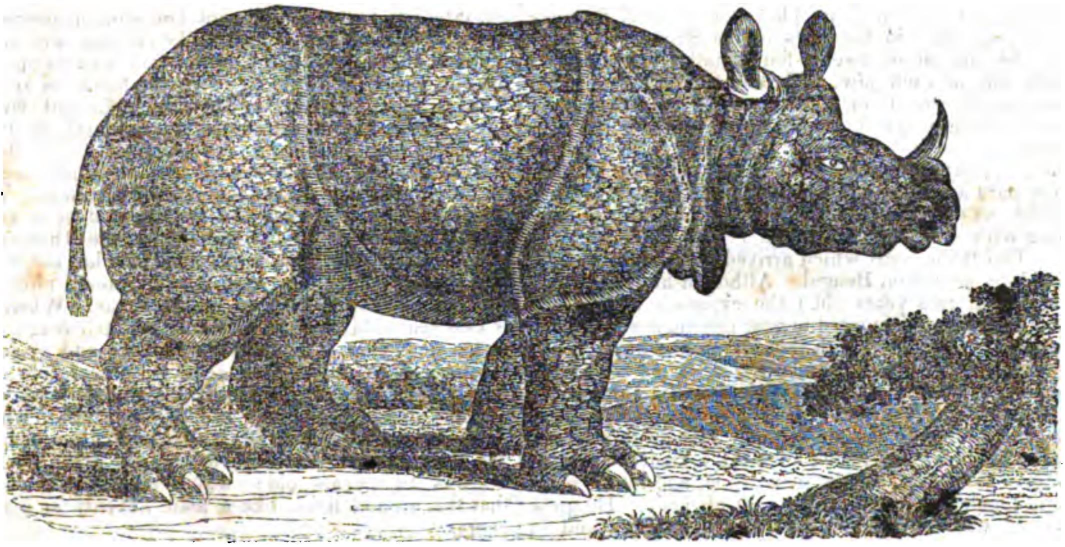
Captain Beechey remained within the Blossom at Chamisso Island, occupied in surveying the coast and harbours of Kotzebue Sound, until the approach of winter rendered it necessary for him to hasten his departure. During his stay, he made several excursions, and procured many interesting fossil remains. He had also an opportunity of remarking the habits and peculiarities of the natives, or western Esquimaux, as they are called, in contradistinction to their eastern brethren. Their deserted huts were frequently found in many places, and traces of a recent residence were often visible. He particularly notices their burial-places, and the mode which they have of disposing of their dead. The corpse is deposited, with the head to the westward, in a sort of coffin formed of loose planks, and placed upon a platform of drift-wood, which is sometimes raised to the height of two feet. A double tent of spars of drift-wood, put together closely, is erected over this as a covering to secure the body from the depredations of foxes and wolves: but the rapacity of those animals succeeds before long in breaking through this feeble protection. The body is generally dressed in a frock made of eider-duck skins, and covered with hides of deer or sea-horse. The coffin and planks are sometimes omitted, and the corpse then rests simply on the drift-wood. We give on the opposite column a representation of one of these graves.

The Blossom quitted the sound on the 14th of October, and having repassed Behring's Strait, stood to the southward, and reached the harbour of Francisco, in California, on the eighth of November. Here Captain Beechey had intended to recruit his supplies; but the inadequacy of the means which it afforded compelled him to proceed first to the Sandwich Islands, and thence to Macao, where he procured sufficient stores to enable him to prosecute the voyage. The ship left Macao on the 30th of April, 1827, and after visiting the great Loo Choo, passed through Behring's Strait, and reached the rendezvous this time by the 5th of August; still there was no trace of Franklin, and they accordingly stood forward to the northward. The unfavourable stage of the ice prevented them from proceeding so far as they had gone the former year; and after the loss of their barge, and a narrow escape of wreck on the part of the ship, they were compelled, by the early setting in of the winter, to take a final leave of the Polar Sea, and retrace their course to England, which they reached on the 8th of September, 1828, after an absence of three years and a half, and a voyage of 73,000 miles.



WESTERN ESQUIMAUX GRAVE.

NATURAL HISTORY.



THE RHINOCEROS.

"After the elephant, the Rhinoceros is the most powerful of all quadrupeds. He is at least twelve feet in length, from the extremity of the snout to the tail; six or seven feet in height; and the circumference of his body is very nearly equal to his length; he is therefore like the elephant in bulk; and if he appears much smaller, it is because his legs are much shorter in proportion to those of the elephant; but he differs widely from that sagacious animal, in his natural faculties, and his intelligence; having received from Nature merely what she grants in common to all animals; deprived of all feeling in the skin, having no organ answering the purpose of hands, nor distinct for the sense of feeling, he has nothing instead of a trunk but a moveable upper lip, in which centres all his dexterity. He is superior to other animals only in strength, size, and the offensive weapon which he carries upon his nose, and which is peculiar to him. This weapon is a very hard horn, solid throughout, and placed more advantageously than the horns of ruminating animals; these only protect the superior parts of the head and neck, whilst the horn of the Rhinoceros defends all the exterior parts of the snout, and preserves the muzzle, the mouth, and the face from insult; so that the tiger attacks more readily the Elephant, in seizing his trunk, than the Rhinoceros, which he cannot attack in front without running the danger of being killed, for the body and limbs are covered with an impenetrable skin; and this animal fears neither the claws of the tiger nor the lion, nor even the fire and weapons of the huntsman; his skin is a dark leather, of the same colour, but thicker and harder than that of the elephant; he does not feel the sting of flies; he cannot contract his skin; it is only folded by large wrinkles on the neck, the shoulders, and the buttocks, to facilitate the motions of the legs, which are massive, and terminate in large feet, armed with three great claws. The skin of the two-horned Rhinoceros is much more easily penetrable than that of the single-horned. He has the head larger in proportion than the elephant, but the eyes still smaller, which he never opens entirely, and they are so situated that the animal can see only what is in a direct line before him. The upper jaw projects above the lower, and the upper lip has a motion, and may be lengthened six or seven inches; it is terminated by a sharp edge, which enables this animal, with more facility than other quadrupeds, to gather branches and grass, and to divide them into handfuls, as the elephant does with his trunk. This muscular and flexible lip is a sort of trunk very incomplete, but which is equally calculated for strength and dexterity. Instead of those long ivory teeth which form the tusks of the elephant, the Rhinoceros has his powerful horn, and two strong incisive teeth in each jaw. These incisive teeth, which the elephant has not, are placed at a great distance from each other in the jaws of the Rhinoceros. He has, besides these, twenty-four smaller teeth, six on each side of each jaw. His ears are always erect; they are, for the form, like those of a hog, only they are larger in proportion to his body; they are the only hairy parts of it. The end of the tail is like that of the elephant, furnished with a tuft of large bristles, very hard and very solid. Huge and seemingly unwieldy as the Rhinoceros is, he has the power of running with very great swiftness.

The Rhinoceros which arrived in London in 1739 had been sent from Bengal. Although he was young, (being but two years old,) the expenses of his food and his voyage amounted to near one thousand pounds sterling; he was fed with rice, sugar, and hay. They gave him daily seven pounds of rice, mixed with three pounds of sugar; which they divided into three parts. He had also a great quantity of hay and green grass, to which he gave the preference. His drink was nothing but water, of which he drank a great quantity at once. He was of a quiet disposition, and let his manager touch him on all the parts of his body. He grew unruly when he was struck or was hungry; and in both cases he could not be appeased without giving him something to eat. When he was angry, he leaped forward with impetuosity to a great height, beating furiously the walls with his head; which he did with a prodigious quickness, notwithstanding his heavy appearance.

"This Rhinoceros when he was two years old was not much higher than a young cow who has not yet borne young; but his body was very long, and very thick. The tongue of this young Rhinoceros was soft, like that of a calf; his eyes had no vivacity; they were like those of a hog in form, and were placed very low; that is, nearer the opening of the nostrils.

"Mr. Parsons says, that he has observed a very particular quality in this animal; he hearkened with a sort of continual attention to any noise; so that, if he was even sleepy, employed in eating, or in satisfying other urgent wants, he started instantly, raised up his head, and gave attention till the noise had ceased.

"It is certain that some Rhinoceroses have but one horn on the nose, and others two. In the two-horned Rhinoceros, one of the horns is smaller than the other, and is situated above it. When the animal is quiescent these horns are loose, but they become fixed when it is irritated. There are single horns of three feet and a half, and perhaps of more than four feet in length. Commonly, these horns are brown, or olive colour; yet some are gray, and even white. They have only a small concavity, in form of a cup, at their basis, by which they are fastened to the skin of the nose; the remaining part of the horn is solid, and very hard. It is with this weapon that the Rhinoceros is said to attack, and sometimes to wound mortally, the largest elephants, whose long legs give to the Rhinoceros, who has them much shorter, an opportunity of striking them with his horn under the belly, where the skin is tender and more penetrable; but when he misses the first blow, the elephant throws him on the ground, and kills him.

"The horn of the Rhinoceros is more valued by the Indians than the ivory of the elephant; not so much on account of the matter, of which they make several works with the chisel, as for its substance, to which they attribute diverse virtues and medicinal properties. The white ones, as the most rare, are also those which they value most. Cups made of this horn are used to drink out of by many of the Indian princes, under the erroneous idea that when any poisonous fluid is put into them, the liquor will ferment, and run over the top.

"The Rhinoceros, without being ferocious or carnivorous, or even very wild, is nevertheless untameable. He is of the nature of a hog, blunt and grunting, without intellect, without sentiment, and without tractableness. These animals are also, like the hog, very much inclined to wallow in the mire; they like damp and marshy places, and seldom leave the banks of rivers. They are found in Asia and Africa, in Bengal, Siam, Laos, in the Mogul dominions, in Sumatra, in Java, in Abyssinia, and about the Cape of Good Hope. But in general, the species is not so numerous, or so universally spread, as that of the elephant. The female brings forth but one young, and at a great distance of time. In the first month, the Rhinoceros is not much bigger than a large dog; he has not, when first brought forth, the horn on the nose, although the rudiment of it is seen in the fœtus. When he is two years old, this horn is only an inch long; and in his sixth year, it is about ten inches; and as some of these horns have been seen very near four feet long, it seems they grow till his middle age, and perhaps during the whole life of the animal, which must be long, since the Rhinoceros described by Mr. Parsons was not come to half his growth when he was two years old; which makes it probable that this animal lives, like a man, seventy or eighty years.

"Without being useful, as the elephant, the Rhinoceros is very hurtful, by the prodigious devastation which he makes in the fields. The skin is the most valuable thing of this animal. His flesh is excellent, according to the taste of Indians and Negroes. Kolben says, he has often eaten it with great pleasure

His skin makes the best and hardest leather in the world; and not only his horn, but all the other parts of his body, and even his blood, his urine, his excrements, are esteemed as antidotes against poison, or a remedy against several diseases; probably, however, all those virtues are imaginary.

"The Rhinoceros feeds upon herbs, thistles, prickles, shrubs, and he prefers this wild food to the sweet pasture of the verdant meadows; he is very fond of sugar-canes, and eats all sorts of corn. Having no taste whatever for flesh, he does not molest small animals, neither fears the large ones, living in peace with them all, even with the tiger, who often accompanies him, without daring attack him: I doubt, therefore, whether the battles betwixt the elephant and the Rhinoceros have any foundation; they must, however, seldom happen, since there is no motive for war on either side; and, besides, no sort of antipathy has been observed between these animals. Some have even been seen in captivity, living quietly together, without giving offence or provocation to each other.

"The Rhinoceroses do not herd together, nor march in troops, like the elephant; they are wilder, and more solitary, and perhaps more difficult to be hunted and subdued; they never attack men unless provoked; but then they become furious, and are very formidable: the steel of Damascus, the scimitars of Japan, cannot make an incision in his skin; the darts and lances cannot pierce him through: his skin even resists the balls of the musket; those of lead become flat upon his leather, and the iron ingots cannot penetrate through it: the only places absolutely penetrable in his body armed with a cuirass, are the belly, the eyes, and round the ears; so that huntsmen, instead of attacking this animal standing, follow him at a distance by his track, and wait to approach him at a time that he sleeps or rests himself. There is in the King of France's cabinet a fœtus of a Rhinoceros, which was sent from the island of Java. It was said, in a memorial which accompanied this present, that twenty-eight huntsmen had assembled to attack its mother; they had followed far off for some days, one or two men walking now and then before, to reconnoitre the position of the animal. By these means they surprised her when she was asleep, and came so near in silence, that they discharged all at once their twenty-eight guns into the lower parts of her belly.

"We have seen that this animal has a good ear; it is also affirmed that he has the sense of smelling in perfection; but it is pretended he has not a good eye, and sees only before him: that his eyes are so small, and placed so low, and so obliquely, and have so little vivacity and motion, that this fact needs no other confirmation. His voice, when he is calm, resembles the grunting of a hog; and when he is angry, his sharp cries are heard at a great distance. Though he lives upon vegetables, he does not ruminate; thus it is probable, that, like the elephant, he has but one stomach, and very large bowels, which supply the office of the paunch. His consumption, though very great, is not comparable to that of the elephant; and it appears, by the thickness of his skin, that he loses less than the elephant by his perspiration."

It is supposed by some that the Rhinoceros is the unicorn of the scriptures. It is generally admitted that the various qualities therein assigned to that animal are combined in the Rhinoceros, viz. rage, untameableness, and strength. The Rhinoceros, likewise, has a single horn, thus corresponding in this particular. There is, however, as has been seen, a species of this animal which has two horns; and it appears that the unicorn sometimes had two:—"His horns are like the horns of a unicorn." We leave the subject for each one to judge for himself, remarking as we leave it, that there have been various opinions as to the unicorn, some supposing it to be the wild goat, others the wild bull, others again the wild ass, and so on.

BIOGRAPHY.

ST. ROCHE.

We give the following article relative to a Catholic saint, merely to show what some men believe.

All that Butler can affirm of him is, that making a pilgrimage from Montpelier to Rome during a pestilence, he devoted himself to the sick, became infected, made a shift to crawl into a neighbouring forest, bore incredible pains with patience and joy, returned to France, practised austere penance and piety, and died at Montpelier.

In the "Golden Legend" he is called St. Rock; and it relates that when infected by the pestilence, and lacking bread in the forest, a hound belonging to one Gotard daily took bread away from his master's board, and bare it to Rock, whom Gotard thereby discovered, and visited, and administered to his necessities; wherefore the hound came no more; and Rock was healed by revelation of an angel; and with touching and blessing he cured the diseased in the hospital, and healed all the sick in the city of Placentia. Being imprisoned, and about to die, he prayed that he might live three days longer in contemplation of the Passion, which was granted him; and on the third day an angel came to him, saying, "O! Rock, God sendeth me for thy soul; what thou now desirest thou shouldst ask." Then St. Rock implored that whoever prayed to him after death might be delivered from pestilence; and then he died. And anon an angel brought from heaven a table whereon was divinely written, in letters of gold, that it was granted—"That who that calleth to Saynte Rock mekely, he shall not be hurte with ony hurte of pestylence;" and the angel laid the table under Rock's head; and the people of the city buried St. Rock solemnly, and he was canonized by the pope gloriously. His life in the "Golden Legend" ends thus: "The feest of Saynte Rocke is alwaye holden on the morowe after the daye of the assumpcyon of our lady, whiche life is translated out of latyn in englysshe by me, Wyllyam Caxton."

There is an entry among the extracts of the churchwardens' accounts of St. Michael Spurrier-gate, York, printed by Mr. Nichols, thus: "1518. Paid for writing of Saint Royke Masse, *0l. 0s. 9d.*"[*] His festival on this day was kept like a wake, or general harvest-home, with dances in the churchyard in the evening.[†]

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[*] Brand.

[†] Fosbroke's Dict. of Antiq.

The phrase, "sound as a roach," may have been derived from familiarity with the legend and attributes of this saint. He is esteemed the patron saint of all afflicted with the plague, a disease of common occurrence in England when streets were narrow, and without sewers, houses without boarded floors, and our ancestors without linen. They believed that the miraculous interposition of St. Roche could make them as "sound" as himself.

The engraving of St. Roche at the head of this article is from a print published by Marriette. He gathers up his garment to show the pestilence on his thigh, whereat the angel is looking; the dog by his side with a loaf in his mouth is Gotard's hound.

There is a rare print of this saint, with an angel squeezing the wound, by D. Hopfer.—*London Every Day Book.*

PENNY DAILIES.

Within a very recent period, a new species of periodicals has sprung into existence answering to the title above, affording every individual who can spare one cent a day the opportunity of furnishing himself with a daily paper.

We deem the commencement of this mode of disseminating intelligence an era in its annals. It will enable thousands, nay, millions, who have not heretofore enjoyed access to the daily news, now to gratify themselves in this respect. The consequence will be, that good papers of this description will obtain a circulation altogether unparalleled in the history of the daily press. And co-extensive with their vast circulation will be their means of exerting an influence for good or for evil. Viewed in this light, these papers assume an importance hitherto unknown to periodicals. They reach the very depths of the social state, and move the mighty waters which lie undisturbed and stagnant below the reach of our daily mammoth sheets.

Pre-eminently conspicuous at the head of these penny dailies, stands the New-York Sun, the great progenitor of the whole tribe. This little paper has not completed its first three quarters, notwithstanding which, it has a circulation of nine or ten thousand copies. This circulation, extensive as it is, is constantly becoming more so. In relation to this paper, we are gratified to find that its moral bearing is decidedly good, both negatively and positively:——negatively, in excluding from its columns certain things deemed demoralizing by many, but which are generally admitted into secular papers; and positively, by lashing vice and crime with unsparing hand. Such a terror is it to evil doers, by blazoning their names to the world, that it has materially diminished the number of daily cases tried at the Police Office, very few being so utterly reckless and shameless as to be willing to find their names at every street corner in connexion with deeds of infamy. Add to this, that the Sun is conducted with unusual sprightliness, enlivening its paragraphs by exquisite sallies of genuine pleasantry, such as all admire and few can equal; and we feel perfectly warranted in recommending it to the community as a paper well worthy of universal acceptance.

We wish we could say as much in favour of *all* the little dailies. But this we cannot do. There is *one at least* against which we would put the public on their guard. It is the one which raises the senseless clamour of Church and State against Temperance Societies, and whose whole moral bearing is of a similar nature. Most assuredly, a paper that will at this time of day denounce the Temperance Association as a Church and State concern—a Society sanctioned by men of all parties, whether religious or political; a Society which knows no party, but which seeks the moral, intellectual, and physical welfare of the whole community—a paper, we say, which at this time of day will address itself to the basest passions and prejudices against such an Association, and others of a similar description, ought to be spurned from the door of every decent citizen. And the individual who publishes such a paper, thereby encouraging vice, is a monster unworthy of the name he assumes—unworthy of the name of *Man.* In conclusion, we have only to caution the community that they look well to the moral bearing of these penny dailies before subscribing for them, instead of merely taking into consideration their price.

The London Morning Herald says, the city of London has 194,000 houses, and 1,474,000 inhabitants. Paris has 45,000 houses, and 773,000 inhabitants. Petersburgh has 95,000 houses, and 449,000 inhabitants. Naples 40,000 houses, and 360,000 inhabitants. Vienna 7,500 houses, and 390,000 inhabitants. Paris has, according to the Herald's statement, nearly fifty people to each house.

POETRY.

SPRING.—N. P. WILLIS.

The Spring is here—the delicate-footed May,
  With its slight fingers full of leaves and flowers;
And with it comes a thirst to be away,
  Wasting in wood-paths its voluptuous hours—
A feeling that is like a sense of wings,
Restless to soar above these perishing things.

We pass out from the city's feverish hum,
  To find refreshment in the silent woods
And nature that is beautiful and dumb,
  Like a cool sleep upon the pulses broods.
Yet even there, a restless thought will steal,
To teach the indolent heart it still must *feel.*

Strange, that the audible stillness of the noon,
  The waters tripping with their silver feet,
The turning to the light of leaves in June,
  And the light whisper as their edges meet—
Strange—that they fill not, with their tranquil tone,
One spirit, walking in their midst alone.

There's no contentment in a world like this,
  Save in forgetting the immortal dream;
We may not gaze upon the stars of bliss,
  That through the cloud-rifts radiantly stream;
Bird-like the prisoned soul *will* lift its eye
And sing—till it is hooded from the sky.

MICROSCOPE.

An optical instrument which magnifies objects, so that the smallest may be distinctly seen and described by means of a proper adjustment and combination of lenses or mirrors. Microscope, Single, is one which consists of a single lens. Microscope, Compound, consists of two lenses at least, but generally three, and often more. Microscope, Solar, invented by Dr. Lieburkhun, is employed to represent very small objects on a very large scale, in a dark room. Microscope, Botanica, is a compact instrument, which particularly recommends itself to the practical botanist and naturalist, as a truly able assistant in their researches through the animal, vegetable, and mineral kingdoms, and more especially when its facility of management and portability, combined with its extent of magnifying powers, are brought into consideration. The invention of microscopes, like many other ingenious discoveries, has been claimed for different authors. Huygens informs us that Drebell, a Dutchman, constructed the first microscope in 1621; but Borelli states, in a letter to his brother, that when he was ambassador in England in 1619, Cornelius Drebell showed him a microscope, which he said was given him by the archduke Albert, and had been made by Jansen, whom he considers to have been the real inventor, although F. Fontana, a Neapolitan, claimed, in 1646, the honour of the invention to himself, and dated it from the year 1618.

SECTION VI

HISTORY.

EGYPT.

Egypt, as we have seen, was settled by Mizraim, the son of Ham. Upon his death, this country was divided into three kingdoms, over which reigned three of his sons. Ananim or Anan was king of Lower Egypt or the Delta; Naphtuhim or Naph, of the parts near and about Memphis; Pathrusim or Pathrus, of the country of Thebais. From these individuals those countries derived their names. Lower Egypt was denominated Zoan or Zanan, or more properly Tanan; the kingdom of Memphis was called the land of Noph or Naph; and the kingdom of Thebais, the land of Pathrus or Pathros.

Ananim, the king of Lower Egypt, was by no means eminent. Very little is recorded of him. According to Syncellus he reigned 63 years.

Naphtuhim, who was by the Egyptians called Tosorthrus, and afterwards Æsculapius by the Latins, was king of Naph or Memphis. He was more eminent than the brother of his which has just been mentioned, but less so than his brother Pathrusim.

Pathrusim was king of Thebais. He is supposed by some to have invented letters. The Egyptians called him Tyoth or Thoth. He was also called Athotes. His Greek name was Hermes, and his Latin name Mercurius. He was a very distinguished monarch. He made laws, enriched and improved his language, prescribed the mode of public worship, and made astronomical observations.

On the death of this celebrated monarch, his dominion was divided into two kingdoms. The portion lying east of the Nile was governed by a person of the same name with himself, and that lying west by an individual named Cencenes. The kingdom of the former retained the name of Thebais; that of the latter took the name of *This* or *Thin*. The former is said to have reigned 33 years; the latter 31.

The successor of the second king of Thebes was Diabies, who reigned 19 years. Venephes succeeded Cencenes in the kingdom of Thin. He built some pyramids in a plain towards Libya, in the desert of Cochome. But the kings of Thin never raised themselves to distinction, and have left little more than their names, as mementos to remind us that they once lived.

The kings who reigned in those times in the other kingdoms of Egypt, viz. in Memphis and Lower Egypt, were these:—Mesochis, Soiphis, and Tesortasis in Memphis; and Aristarchus and Spanius in Lower Egypt or Tanis.

Of the succeeding kings of Egypt during this period, we have little but their names, and the dates of their reigns.

The following is from Manetho, the ancient Egyptian historian.

"After the dead demi-gods, the first dynasty consisted of eight kings, of whom the first was Menes the Thinite; he reigned 62 years, and perished by a wound received by an hippopotamus. Athothis his son reigned 57 years; he built the palaces at Memphis, and left the anatomical books, for he was a physician. Cencenes his son reigned 31 years. Venephes his son reigned 23 years. In his time, a great plague raged through Egypt. He raised the pyramids near Cochome. Usaphædus his son reigned 29 years. Miebidus his son 26 years. Semempsis his son reigned 18 years. In his reign, a terrible pestilence afflicted Egypt. Bienaches his son reigned 26 years. The whole number of years" (of this first Thinite dynasty) "amounted to 253 years."

Manetho gives a dynasty of nine Memphite kings, after giving another dynasty of Thinite kings. This dynasty of Memphite kings he denominates the third dynasty, as if they succeeded the second; whereas it is evident that they were contemporaneous with the first, reigning over a different portion of Egypt at the same time. The following is the dynasty under consideration.

"Of nine Memphite kings.—Necherophes reigned 28 years. In his time, the Libyans revolted from the Egyptians; but on account of an unexpected increase of the moon, they surrendered themselves for fear. Tosorthrus reigned 29 years. He is called Asclepius by the Egyptians, for his medical knowledge. He built a house of hewn stones, and greatly patronized writing. Tyris reigned 7 years. Mesochris 17 years. Soiphis 16 years. Tosertasis 19 years. Achis 42 years. Siphuris 30 years. Cerpheres 26 years. Altogether 214 years."

It was in the reign of Timaus, one of the kings of Lower Egypt, probably about A. M. 2000, that that kingdom was invaded by a horde of Barbarians, and subjected to their domination. These new masters of the country treated the conquered in the most inhuman manner, pillaging, massacreing, and destroying. They were denominated *Hycsos*, or shepherd kings, their occupation being, the care of flocks and herds. They are sometimes confounded with the Israelites, but this is a great mistake. They must have been long prior to that nation. They held the government when Abraham visited the country, but were expelled before the time of Joseph. This will explain the circumstance that Abraham, who was a shepherd, was so well received in Egypt, while Joseph's brethren, who were likewise shepherds, were abominated by the Egyptians. The following is Manetho's account of these shepherd kings.

OF THE SHEPHERD KINGS.

"We had formerly a king whose name was Timaus. In his time it came to pass, I know not how, that God was displeased with us: and there came up from the East, in a strange manner, men of an ignoble race, who had the confidence to invade our country, and easily subdued it by their power without a battle. And when they had our rulers in their hands, they burnt our cities, and demolished the temples of the gods, and inflicted every kind of barbarity upon the inhabitants, slaying some, and reducing the wives and children of others to a state of slavery. At length they made one of themselves king, whose name was Salatis: he lived at Memphis, and rendered both the upper and lower regions of Egypt tributary, and stationed garrisons in places which were best adapted to that purpose. But he directed his attention principally to the security of the eastern frontier; for he regarded with suspicion the increasing power of the Assyrians, who he foresaw would one day undertake an invasion of the kingdom. And observing in the Saite nome, upon the east of the Bubastite channel, a city which from some ancient theological reference was called Avaris; and finding it admirably adapted to his purpose, he rebuilt it, and strongly fortified it with walls, and garrisoned it with a force of two hundred and fifty thousand armed men. To this city Salatis repaired in summer time, to collect his tribute, and pay his troops, and exercise his soldiers in order to strike terror into foreigners.

"And Salatis died after a reign of nineteen years: after him reigned Beon forty-four years: and he was succeeded by Apachnas, who reigned thirty-six years and seven months: after him reigned Apophis sixty-one years, and Ianias fifty years and one month. After all these reigned Assis forty-nine years and two months. These six were the first rulers amongst them, and during all the period of their dynasty, they made war upon the Egyptians in hope of exterminating the whole race. All this nation was styled Hycsos, that is, the Shepherd Kings; for the first syllable Hic, according to the sacred dialect, denotes a king, and Sos signifies a shepherd, but this according to the vulgar tongue; and of these is compounded the term Hycsos: some say they were Arabians. This people, who were thus denominated Shepherd Kings, and their descendants, retained possession of Egypt for the space of five hundred and eleven years.

"After these things he relates that the kings of Thebais and of the other parts of Egypt made an insurrection against the Shepherds, and that a long and mighty war was carried on between them, till the Shepherds were subdued by a king whose name was Alisphragmuthosis, and were by him driven out of the rest of Egypt, and hemmed within a place containing ten thousand acres, which was called Avaris. All this tract (says Manetho) the Shepherds surrounded with a vast and strong wall, that they might retain all their possessions and their prey within a hold of strength.

"And Thummosis, the son of Alisphragmuthosis, endeavoured to force them by a siege, and beleaguered the place with a body of four hundred and eighty thousand men; but at the moment when he despaired of reducing them by siege, they agreed to a capitulation, that they would leave Egypt, and should be permitted to go out without molestation wheresoever they pleased. And according to this stipulation, they departed from Egypt with all their families and effects, in number not less than two hundred and forty thousand, and bent their way through the desert towards Syria. But as they stood in fear of the Assyrians, who had then dominion over Asia, they built a city in that country which is now called Judæa, of sufficient size to contain this multitude of men, and named it Jerusalem.

"(In another book of the Egyptian histories Manetho says) That this people, who are here called Shepherds, in the sacred books were also styled Captives."

LITERATURE.

LANGUAGE.

Much curious speculation has been employed with regard to the invention of letters, both as to their author and the period of their invention. Many have supposed the Egyptians to have been the first nation that used them, and Thyoth of Pathrusim to have been their inventor. Others have supposed them to have been invented prior to the Deluge, and to have been transmitted by Noah to his posterity. We think it a sufficient confutation of the latter opinion, that the descendants of Noah did not all understand the use of letters till they learned them a long time after the Deluge; whereas there is no reason to suppose they would have lost the use of them had they been acquainted with them. In support of the other opinion, viz. that letters had their origin in Egypt, there is no inconsiderable evidence. Pliny, while he attributes their origin to another source, acknowledges that others ascribed their authorship to the Egyptians, making Mercury their inventor. Diodorus, Plutarch, Cicero, Tertullian, and Plato, were of the same opinion. Kircher describes the very shape of the letters which he invented. Philo-Biblius, the translator of Sanchoniathon's history, quoted by Eusebius and Porphyry, mentions the commentaries of Taautus, or Thyoth, and the sacred letters in which he wrote his books. Jamblicus speaks of a vast number of books by this same Taautus. And all antiquity agrees that the use of letters was very early in Egypt, and that Thyoth or Mercury was the first who used them there. Now if Thyoth, i. e. Pathrusim, the son of Misraim and grandson of Ham was the first in Egypt who used letters, we think he must have been their inventor. For it is not supposable that letters would not have been *used* before, had they been *known*. We must therefore conclude, from the tenor of all the evidence before us, that letters were invented by Pathrusim, the grandson of Ham; and that mankind are indebted to Egypt for this invaluable blessing. The idea that letters must have been known before the Deluge, because there are certain short Ante-diluvian annals, finds a ready confutation in the fact of the great age of the Ante-diluvians, by which means the history of those times could be transmitted orally from the father to the son, by passing through very few hands; also in the fact, that annals can be preserved by symbols and hieroglyphics.

EXPLANATION OF WORDS AND PHRASES, &c.

Affetuoso. Lat.—"Musical term." Tenderly.

Affirmatim. Lat.—"In the affirmative."

Afflavit Deus, et dissipantur. Lat.—"God has sent forth his breath, and they are dispersed." This was the inscription on the medal struck by Elizabeth, on the dispersion of the Spanish Armada.

A fin. Fr. (pron. *ah faeng*,)—"To the end."

A fortiori. Lat.—"With stronger reason."

Agate. "A precious stone composed of various substances, as chalcedony, cornelian, jasper, hornstone, quartz, &c.;" a very small sized printer's type.

A grands frais. French phrase. (pron. *Ah gron fra.*) —"At great expense."—Sumptuously.

Aide-toi, le ciel t'aidera. French. (pron. *Ade-twa, le ceel taderah.*) Fontaine.—"Help yourself, and Heaven will help you."—Depend rather on your own exertions than your prayers.

A la bonne heure. Fr. (pron. *Ah la bon eur.*)—"At a good hour."—This comes happily—it is well timed.

Alere flammam. Lat.—"To feed the flame."—To increase the tendency.

MYTHOLOGY.

CUPID.

"Cupid was the son of Venus, and the emblem of *love*. He was generally painted as a beautiful winged boy, with a bow and arrows, and very often with a bandage over his eyes. Ancient statues sometimes represent him bestriding the back of a lion, and playing on a lyre, whilst the fierce savage, turning his head, seems to listen to its harmonious chords.

"Sometimes he appears mounted on a dolphin; and sometimes he is represented as breaking the winged thunderbolt of Jove. His wife was Psyche—a Greek word, signifying spirit, or soul."

Although Cupid is stated in the preceding description to have been the son of Venus, yet various writers make him the son of various parents. Plato represents him to be without father or mother. Hesiod says he was born of the earth before Chaos. And others say other things on this subject. The general idea, however, was, that Venus was his mother, and Mercury, or Mars, or Vulcan, his father.

As he was the god of love, so he is represented as holding a certain sway over all animate nature. "I have," says Cupid in Lucian, "made myself familiar with lions themselves. I ride upon their backs; I hold their manes, and use them for bridles. They wag their tails and lick my hand in flattery of me."

"The Loves" (or Cupids) says an epigram, "take the bow from Phœbus, the thunderbolt from Jupiter, the helmet and other arms from Mars, the club from Hercules, the wings of his feet from Mercury, the torch from Diana, the trident from Neptune, and the thyrsus from Bacchus."

THEMIS, ASTRÆA, NEMESIS,

'Are three goddesses, who contrive and consult together on affairs of great moment.

"Themis, the first of them, is the daughter of Cœlum and Terra. According to the signification of her name, her office is to instruct mankind to do things honest, just, and right. Therefore her images were brought and placed before those who were about to speak to the people, that they might be admonished thereby to say nothing in public but what was just and righteous. Some say she spoke oracles at Delphi, before Apollo; though Homer says, that she served Apollo with nectar and ambrosia. There was another Themis, of whom Justice, Law, and Peace, are said to be born. Hesiod, by way of eminence, calls her modest, because she was ashamed to say any thing against that which was done in right and equity. Eusebius calls her Carmenta; because by her verse and precepts she directs every one to that which is just. But here he means a different Carmenta, who was the mother of Evander, otherwise called Themis Nicostrata, a prophetical lady. She was worshipped by the Romans, because she prophesied; and was called Carmenta, either from the verse in which she uttered her predictions, or from the madness which seemed to possess her when she prophesied. To this lady an altar was dedicated near the gate Carmentalis, by the Capitol; and a temple was also built to her honour on this occasion: When the senate forbade the married women the use of litters or sedans, they combined together, and resolved that they would never have children, unless their husbands rescinded that edict: they kept to this agreement with so much resolution, that the senate was obliged to change its sentence, and yield to the women's will, and allow them all sedans and chariots again. And when their wives conceived and brought forth fine children, they erected a temple in honour of Carmenta.

"Astræa, the daughter of Aurora and Astræus the Titan (or, as others rather say, the daughter of Jupiter and Themis,) was esteemed the princess of Justice. The poets feign, that in the Golden Age she descended from heaven to the earth; and being offended at last by the wickedness of mankind, she returned to heaven again, after all the gods had gone before her. She is many times directly called by the name of Justitia; as particularly by Virgil. And when she had returned to heaven again, she was placed where we now see the constellation Virgo.

"The parents of Nemesis were Jupiter and Necessity; or, according to others, Nox and Oceanus. She was the goddess that rewarded virtue, and punished vice: and she taught men their duty, so that she received her name from the distribution that she made to every body. Jupiter deceived her, as the story says, in the shape of a goose; and that she brought forth an egg, which she gave to a shepherd whom she met, to be carried to Leda. Leda laid up the egg in a box, and Helena was soon after produced of that egg. But others give us quite different accounts of the matter. The Romans certainly sacrificed to this goddess when they went to war: whereby they signified that they never took up arms unless in a just cause. She is called by another name, Adrastæa, from Adrastus, king of the Argives, who first built an altar to her; or, perhaps from the difficulty of escaping from her: because no guilty person can flee from the punishment due to his crime, though justice sometimes overtakes him late. She has indeed wings, but does not always use them; but then the slower her foot is, the harder is her hand:

> "Vengeance divine to punish sin moves slow.
> The slower is its pace, the surer is its blow.

"Rhamnusia is another name of this goddess, from Rhamnus, a town in Attica, where she had a temple, in which there was a statue of her made of one stone, ten cubits high: she held the bough of an apple-tree in her hand, and had a crown upon her head, in which many images of deer were engraven. She had also a wheel, which denoted her swiftness when she avenges."

ÆOLUS.

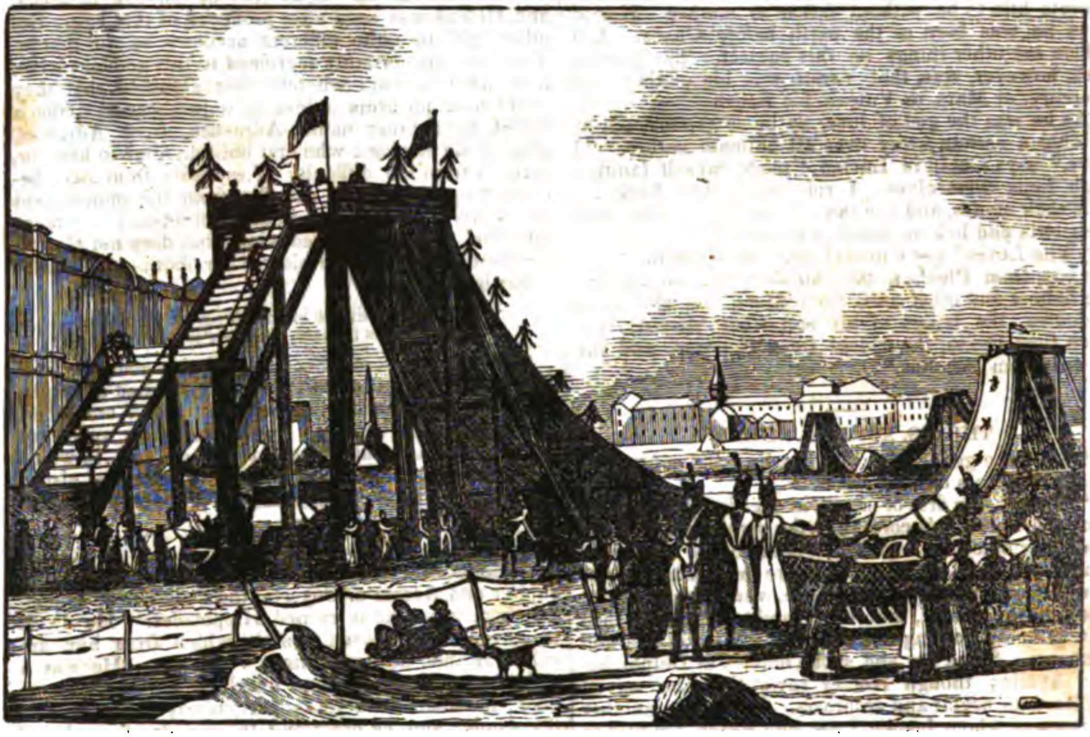
"Æolus was the 'god of the winds,' the son of Jupiter and Acesta or Segesta, the daughter of Hippotas, from whom he is named Hippotades. He dwelt in one of those seven islands which from him are called Æoliæ, and sometimes Vulcaniæ. He was a skilful astronomer, and an excellent natural philosopher; he understood more particularly the nature of the winds; and, by observing the clouds of smoke of the Æolian islands, he was enabled to foretel winds and tempests before they arose; and it was generally believed they were under his power, so that he could raise the winds, or still them as he pleased. Hence he was styled emperor and king of the Winds, the children of Astræus and Aurora. His children were Boreas, the north wind; Auster, the south; Eurus, the east; and Zephyrus the west. Virgil describes Juno coming to him at his palace, as follows:

> Thus raged the goddess, and with fury fraught,
> The restless regions of the storms she sought;
> Where, in a spacious cave of living stone,
> The tyrant Æolus, from his airy throne,
> With power imperial curbs the struggling winds,
> And sounding tempests in dark prisons binds.
> This way and that the impatient captives tend,
> And, pressing for relief, the mountains rend.
> High in this hall the undaunted monarch stands,
> And shakes his sceptre, and their rage commands;
> Which did he not, their unresisted sway
> Would sweep the world before them in their way:
> Earth, air, and seas, through empty space would roll.
> And heaven would fly before the driving soul.
> In fear of this, the father of the gods
> Confined their fury to these dark abodes,
> And lock'd them safe, oppress'd with mountain-loads;
> Impos'd a king with arbitrary sway,
> To loose their fetters, or their force allay.

MOMUS.

The name of the god Momus is derived from the Greek, signifying a jester, mocker, or mimic; for that is his business. He follows no particular employment, but lives an idle life, yet nicely observes the actions and sayings of the other gods, and when he finds them doing amiss, or neglecting their duty, he censures, mocks, and derides them with the greatest liberty.

"Neptune, Vulcan, and Minerva contended for the mastery as the most skilful artificer; whereupon Neptune made a bull, Minerva a house, and Vulcan a man: Momus was appointed judge between them; but he chid them all three. He accused Neptune of imprudence, because he did not place the bull's horns in his forehead before his eyes: for then the bull might give a surer and a stronger blow. He blamed Minerva, because her house was immovable; so that it could not be carried away, if by chance it was placed among bad neighbours. But he said that Vulcan was the most imprudent of them all, because he did not make a window in the man's breast, that we might see what his thoughts were, whether he designed some trick, or whether he intended what he spoke. The parents of Momus were Nex and Somnus."



RUSSIAN ICE MOUNTAINS.

Once upon a time, an ambassador from the north, while conversing with a king of Siam, who was all curiosity and attention, told him, among other things, that for some months of the year all the rivers of his country were frozen, and were then able to bear the weight of a carriage. The Indian monarch, thinking himself imposed on, was much enraged; ordered the ambassador to hold his tongue; and declared he would never again believe a single word he might say.

How much more would this king have wondered if he had been told, that the Russians even build houses *of* ice and *on* ice. The empress Elizabeth once gave a grand feast and show on the ice. It was a kind of historical, or rather geographical masquerade. Several months previous, she sent orders to all the governors to send from each, to the noble city of St. Petersburgh, two couple of inhabitants, dressed in the costume of, and accompanied by, animals belonging to their own place. Thus, during the rejoicings of the year 1754, persons coming from above forty different nations were seen riding in procession through the streets of St. Petersburgh; the *Kamtskatkadales* on sledges drawn by fine rough *dogs; Laplanders* on sledges drawn by *rein-deer; Bucharians* upon *Camels;* the *Calmucks* upon *oxen;* the elegant *Circassians* mounted upon the finest and most spirited *horses;* and *Indians* seated on huge and heavy *elephants.*

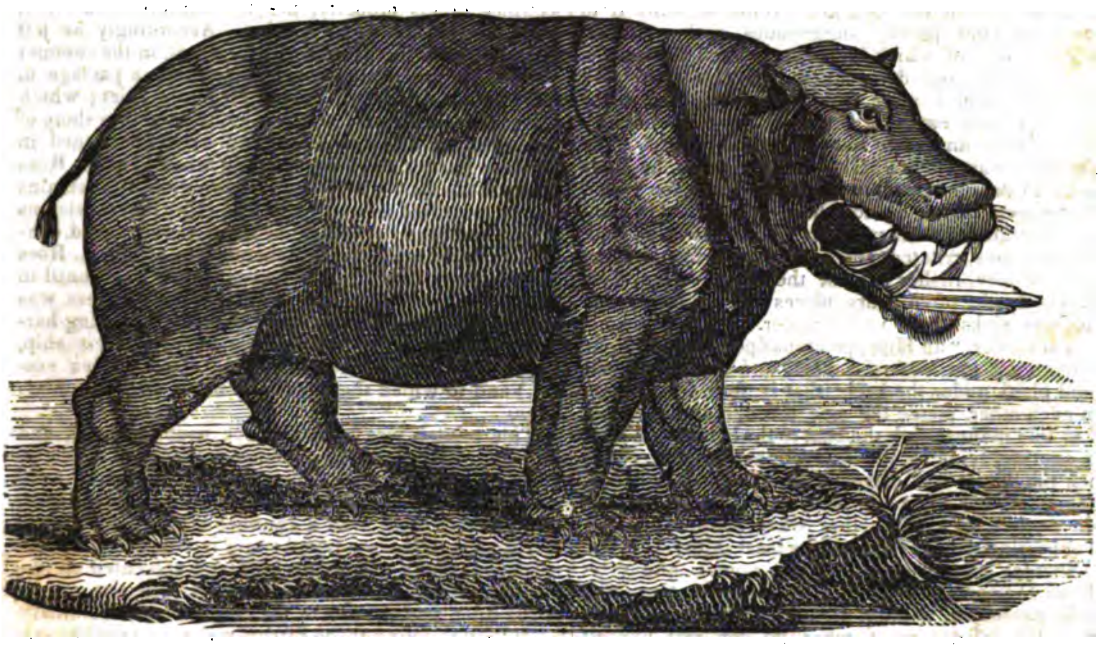
These formed a motley group, and must have had a splendid effect in the marriage procession of the Empress's Jester, who, though last not least, personated *winter*, and was drawn along by *bears!* A very large gallery was built purposely for the occasion, where each nation was allowed to amuse itself with its own music and dancing, producing a curious confusion of sounds, not unlike, we should think, what is called "a Dutch concert." Each nation had a dinner prepared and served up according to its own style. The new married couple were conducted by this laughable escort to a *palace of ice* built on the frozen river Neva, where all the ornaments were made of ice in perfect order: not only were the furniture and chandeliers made of ice, but even the pieces of *cannon*, which fired a grand salute on the arrival of the procession, and did not burst.

The empress spent an enormous sum on this festival; but it enabled her to see the different manners and customs of the various people whom she governed, and gave them an innocent treat, which was long remembered with pleasure.

Among the sports enjoyed on the ice in Russia, are the *Ice-mountains.* These are inclined planes of ice formed on beams, often seventy feet high, down which the sledge is conveyed with a quickness almost like lightning; they are found not only in cities, but in villages, and even in private gardens; and the ball-room is frequently deserted, for the sake of a slide down the Ice-mountain. A flight of steps leads to the top, from whence the passenger, as may be seen on the right of the foregoing engraving, rapidly descends. To make this diversion more easy and agreeable, there are large chairs fixed on skates, these being guided by a man standing behind, who is also provided with skates. The amusement is much liked by the Russian ladies, as well as others. Clad in their pelisses of costly fur, they brave the cold with a heroism which surprises persons from more southern regions. At night, the Ice-mountains are illuminated with coloured lamps; and the reflection of this mass of variegated light from the snow, greatly heightens the beauty of the scene. The nobility and gentry drive about in superb sledges; and Catharine the Second was often seen on such occasions among her people. A very large rich sledge was made for the purpose, capable of containing the whole Imperial family: to this were attached by chains, fourteen or sixteen smaller sledges, following in pairs for her Majesty's suite, the whole line of sledges being drawn by twelve or fourteen horses.

London Saturday Magazine.

NATURAL HISTORY.



THE HIPPOPOTAMUS.

"Although this animal has been celebrated from the earliest ages, it was, notwithstanding, but imperfectly known to the ancients. It was only towards the sixteenth century that we had some precise indications on the subject.

"In comparing the descriptions which we have observed in different travellers, the Hippopotamus appears to be an animal whose body is longer and thicker than that of the rhinoceros; but his fore legs are much shorter. His head is short, and thick in proportion to the body. He has no horns, either on the nose, like the rhinoceros, or on the head, like ruminating animals. His cry when hurt approaches as near to the neighing of the horse, as the bellowing of the buffalo; but his usual voice resembles the neighing of a horse, from which, however, he differs in every other respect; and this fact, we may presume, has been the sole reason for giving him the name of *Hippopotamus*, or *River Horse;* as the howling of the lynx, which resembles that of the wolf, has occasioned him to be called the *stag-like wolf*. The incisive teeth of the Hippopotamus, and especially the two canine teeth of the lower jaw, are very long, very strong, and of so hard a substance, that they strike fire with a piece of iron. This is probably what has given rise to the fable of the ancients, who have reported that the Hippopotamus vomited fire. These canine teeth of this animal are of white, so clear and so hard, that they are preferable to ivory for making artificial teeth. The incisive teeth of the Hippopotamus, especially those of the lower jaw, are very long, cylindrical, and furrowed. The canine teeth, which are also very long, are crooked, prismatic, and sharp, like the tusks of a boar. The molares are square, or rather longer on one side than the other, nearly like the grinders of a man, and so thick, that a single one weighs more than three pounds. The largest of the incisive or the canine teeth, are twelve, and even sixteen inches in length, and sometimes weigh twelve or thirteen pounds each. The skin is in some parts two inches thick; and the Africans cut it into whip-thongs, which, in consequence of their softness and pliability, they prefer to those procured from the rhinoceros hide.

"The male Hippopotamus is about six feet nine inches long, from the extremity of the muzzle to the beginning of the tail; fifteen feet in circumference, and six feet and a half in height. His legs are about two feet ten inches long; the length of the head three feet and a half, and eight feet and a half in circumference; and the width of the mouth two feet four inches. It however sometimes acquires much greater magnitude. In the south of Africa, M. le Vaillant killed one which measured ten feet seven inches in length, and about nine feet in circumference.

"Thus powerfully armed, with a prodigious strength of body, he might render himself formidable to every animal; but he is naturally gentle, and appears never to be the aggressor, except when annoyed or wounded. It has been erroneously stated, that he commonly moves slowly on the land, but, on the contrary, when he has been injured, he has been known to pursue persons for several hours, who escaped with great difficulty. He swims quicker than he runs, pursues the fish, and makes them his prey. Three or four of them are often seen at the bottom of a river, near some cataract, forming a kind of line, and seizing upon such fish as are forced down by the violence of the stream. He delights much in the water, and stays there as willingly as upon land; notwithstanding which, he has no membranes between his toes, like the beaver and otter; and it is plain, that the great ease with which he swims, is only owing to the great capacity of his body, which only makes bulk for bulk, and is nearly of an equal weight with the water. Besides, he remains a long time under water, and walks at the bottom as well as he does in the open air. When he quits it to graze upon land, he eats sugar-canes, rushes, millet, rice, roots, &c. of which he consumes and destroys a great quantity, and does much injury to cultivated lands; but, as he is more timid upon earth than in the water, he is very easily driven away; and, as his legs are short, he cannot save himself well by flight, if he is far from any water. His resource when he finds himself in danger, is to plunge himself into the water, and go a great distance before he re-appears. He commonly retreats from his pursuers; but if he is wounded, he becomes irritated, and immediately facing about with great fury, rushes against the boats, seizes them with his teeth, often tears pieces out of them, and sometimes sinks them under water. "I have seen," says a traveller, "an Hippopotamus open his mouth, fix one tooth on the side of a boat, and another to the second plank under the keel; that is, four feet distant from each other, pierce the side through and through, and in this manner sink the boat to the bottom. I have seen another, lying by the side of the sea-shore, upon which the waves had driven a shallop heavily laden, which remained upon his back dry, and which was again washed back by another wave, without the animal appearing to have received the least injury. When the Negroes go a fishing in their canoes, and meet with an Hippopotamus, they throw fish to him; and then he passes on, without disturbing their fishery any more. He injures most when he can rest himself against the earth; but when he floats in the water, he can only bite. Once, when our shallop was near shore, I saw one of them get underneath it, lift it above water upon his back, and overset it with six men who were in it; but fortunately they received no hurt."

"We dare not," says another traveller, "irritate the Hippopotamus in the water, since an adventure happened which was near proving fatal to three men. They were going in a small canoe, to kill one in a river where there was but eight or ten feet water. After they had discovered him walking at the bottom, according to his custom, they wounded him with a long lance, which so greatly enraged him, that he rose immediately to the surface of the water, regarded them with a terrible look, opened his mouth, and, at one bite, took a great piece out of the side of the canoe, and had very nearly overturned it; but he re-plunged almost directly to the bottom of the water."

"These animals are only numerous in some parts of the world: it even appears that the species is confined to particular climates, and seldom to be met with but in the rivers of Africa. Dutch travellers say that they bear three or four young ones; but this appears very suspicious; as the Hippopotamus is of an enormous bulk, he is in the class of the Elephant, the rhinoceros, the whale, and all other great animals, who bring forth but one; and this analogy appears more certain than all the testimonies that they have exhibited. The female brings forth her young upon land, and the calf, at the instant when it comes into the world, will fly to the water for shelter if pursued; a circumstance which Thumburg notices as a remarkable instance of pure instinct."

THE NORTH-WEST PASSAGE.

LAST VOYAGE OF CAPTAIN ROSS.

We have already adverted to the open charge of negligence which was brought against Captain Ross on his return from the first expedition in 1818, and to the doubts that were by many expressed as to the accuracy of his statements. It will not, of course, be supposed, that the chivalrous honour of a British seaman could tamely brook a censure so directly impugning his personal and professional character. To vindicate his wounded reputation from the stain which, to his jealous eye, seemed to rest upon it, became, therefore, with this gallant officer, an object of paramount importance, for the attainment of which, neither the sacrifice of his property, nor the venture of his life, were thought too great a price. Accordingly he left England with the Victory steam-vessel, in the summer of 1829, in order to discover, if possible, a passage to the westward, through Prince Regent's Inlet; which he reached in August. It was on the western shore of this opening that the Fury had been abandoned in Captain Parry's third voyage, and when Captain Ross reached the spot where she had been left, all remains had been drifted away by the ice. But the provisions which had been deposited on shore were in good condition; and having availed themselves of these, Ross and his party continued to the south and west, until in latitude 70°, and longitude 90° W., their progress was arrested for the season. An excellent wintering harbour was found, in which they secured their ship, (which had already been converted into a sailing vessel,) and to which they gave the name of *Felix Harbour*.

The winter was spent in the usual manner, and here again a party of Esquimaux contributed to alleviate its gloomy dulness. The whole summer of 1830 was spent in examining the continuity of the inlet, and whether there was a channel by which a vessel might pass to the westward; and it was at length ascertained, that a narrow neck of land presented an impassable barrier to all connexion between the waters of the inlet, and the sea to the east: this extraordinary isthmus was found to be fifteen miles in breadth, ten of which were occupied by a chain of fresh water lakes. It was crossed by commander James Ross, who surveyed the sea-coast to the westward as far as to longitude 99°, or to within 150 miles of the point Turnagin of Franklin, to which it appeared directly to tend. The rest of this season was employed in tracing the coast to the eastward from the bottom of the isthmus, and the results left no doubt of its joining to the land forming Repulse Bay. A second winter was now passed in *Sheriff Harbour*, not far from the former winter quarters; which, with that of 1831, is alluded to by Captain Ross as being one of uncommon severity. The summer of 1831 appears to have been occupied in surveying the coast across the isthmus to the north-west; and in the autumn, the Victory was moved fourteen miles to the northward. All hope, however, of saving the ship, was nearly at an end; and the severity of another winter put it quite beyond possibility. Accordingly, in the month of May, 1832, she was abandoned, and our adventurers entered on a perilous and fatiguing journey to Fury Beach, as the only means of saving their lives. This they reached on the first of July following, and they immediately proceeded to repair the boats of the Fury, and to construct a temporary hut.

On the first of August they again departed, and emerged into Barrow's Strait on the 1st of September. Here, however, all their hopes of escape were at once destroyed. Nothing but one impenetrable mass of ice presented itself to view over the whole channel. Accordingly, they were compelled to return to Fury Beach, where another dreary winter was passed. At length, on the 8th of July, 1833, they once more quitted this station. Fortunately they had now the satisfaction of finding clear water, where they had the year before been stopped by ice, and therefore made the best of their way to the eastward. On the 25th they crossed Navy Board Inlet, and on the following morning descried a ship in the offing becalmed, which proved to be the Isabella of Hull, the same vessel that Captain Ross commanded in 1818. At noon they reached her, and having been taken on board, reached England on the 20th of October, 1833, after an absence of more than four years. The results of this expedition may be briefly summed thus:—The discovery of the continent and isthmus of *Boothia* (as the new land to the southward was named by Captain Ross,) of the *Gulf of Boothia*, (or the sea to the eastward,) as also of a vast number of islands, rivers, and lakes; the determining that the north-eastern point of the American continent extends to the 74th degree of north latitude; valuable observations in every branch of science, more particularly in magnetism; and the discovery of the true position of the magnetic North Pole.

By the last accounts which had reached England from Captain Ross, being dated in July 1829, from Disco Island, fears the most alarming were excited for his safety, as the close of 1832 approached, and no tidings were yet heard from him. A meeting of the Geographical Society was held, to consider what steps were fit to be taken; and it was resolved to open a subscription, and organize a committee to make the requisite preparations for despatching a party in quest of him. This was done; and, on the 17th of February, 1833, Captain Back, to whom the expedition had been intrusted, sailed from Liverpool. Two days before the announcement of Captain Ross's safety, a letter was received from Captain Back, dated June 19th, from Jack River, with intelligence of his arrival at that stage of his journey. It was accordingly determined that a messenger should be despatched after him, to carry the welcome news, and direct him now to turn his attention to what had before been a secondary object of the expedition, geographical discovery. The efforts of this gentleman will, it is hoped, complete our knowledge of the north-eastern shores of America. It is probable that he will, in the ensuing summer, reach Coronation Gulf, and, passing Franklin's extreme eastern point, continue the survey along the shore of the Arctic Sea, to the parts surveyed by commander James Ross, and thus connect the discoveries of the late expedition with those of Franklin.

CONCLUSION.

The results of the various expeditions which we have recorded in the preceding pages, may be said to be almost conclusive in favour of the existence of a North-West Passage; but at the same time, equally clear in establishing the impracticability of its navigation. Its accomplishment may now be regarded rather as a point of geographical science, than as an event likely to be at all productive of any immediate practical benefit. The object for which it was originally undertaken,—the discovery of a shorter commercial route to the Indies, has indeed been abandoned, ever since the opinion of John Davis and the older mariners, that the "deep sea fryseth not," was refuted by the experience of modern navigators; but when the motive arising from the prospect of a lucrative traffic had ceased to exist, another, and still more powerful incentive sprung up in its place,—the desire of enlarging the bounds of human knowledge and civilization. It must be pleasing to us to observe the strenuous efforts of our own country in this work; alone and unsupported, she has done nearly all that has been done towards effecting the solution of this great question, and still continues her unremitting exertions on its behalf, in the hope, and the well-founded hope, we trust, of success.—*London Saturday Magazine.*

VIEW OF MOUNT TABOR.

This celebrated mountain, near Kadesh in Galilee, where the territories of Issachar and Naphtali almost met,* stands west of Hermon, but on the other side of Jordan, and in the great plain of Jezreel. Josephus says, it is about four miles high, and on the top is a beautiful plain about three miles and a half in circumference, and inclosed with trees, except towards the south; but according to Maundrel, Thevenot, and Pocock, one may ride to the top, and it is little more than one mile and a half of ascent; and on the top is but half a mile long, and a quarter broad—It is supposed by some that since the time of Josephus, an earthquake may have sunk it and altered its form. The mountain is in the form of a sugar loaf, and from its top is one of the most delightful prospects in the world. It was once surrounded by a wall and trench. It was on this mount that Barak assembled his army, and at the foot of it defeated the host of Jabin.† On the top of this mountain it was long thought our Saviour was transfigured—but, it is so far distant from Cesarea-Philippi, where he was before and after, that it is now doubted by most people of judgment.—*Monthly Repository.*

SERPENTS IN A PILE IN SOUTH AMERICA.

In the Savannahs of Izacubo, in Guiana, I saw the most wonderful, the most terrible spectacle that can be seen; and although it be not uncommon to the inhabitants, no traveller has ever mentioned it. We were ten men on horseback, two of whom took the lead, in order to sound the passages; whilst I preferred to skirt the great forests. One of the blacks who formed the vanguard, returned full gallop, and called to me, "Here, sir, come and see serpents in a pile." He pointed out to me something elevated in the middle of the savannah or swamp, which appeared like a bundle of arms. One of my company then said, "This is certainly one of the assemblages of serpents, which heap themselves on each other after a violent tempest: I have heard of these, but have never seen any; let us proceed cautiously, and not go too near." When we were within twenty paces of it, the terror of our horses prevented our nearer approach, to which, however none of us were inclined.

On a sudden, the pyramid mass became agitated; horrible hissings issued from it, thousands of serpents, rolled spirally on each other, shot forth out of the circle their hideous heads, presenting their envenomed darts and fiery eyes to us. I own I was one of the first to draw back; but when I saw this formidable phalanx remained at its post, and appeared to be more disposed to defend itself than to attack us, I rode round it, in order to view its order of battle, which faced the enemy on every side. I then sought what could be the design of this numerous assemblage; and I concluded that this species of serpents dreaded some collossean enemy, which might be the great serpent, or the caynean, and that they reunite themselves, after having seen this enemy, in order to attack or resist him in a mass.—*Humboldt.*

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* See Joshua xix. 12, 22.

† Judges vi. 6–8.

THE HUMAN STATURE.

The idea that the original progenitors of the human race were exceedingly large, and tall in stature, is still held by some European writers. Not many years since a French author published a work in which he endeavoured to prove that there has been a gradual depreciation in the size of man, from the commencement of the world downwards, and that the same lessening control will continue to exert an influence until the end of time. A corresponding decrease in the age of mankind may be observed, it is alleged, by inquiry into the longevity of the human race in the several centuries of the world. Some contend also, that the deficiency in the number of years between the various personages noticed in the ancient sacred writings and those of our day, is more than counterbalanced by the great increase of our species throughout the world, and that in the place of accumulated years, we have accumulated numbers, whose existence is brief, that the earth may not be filled to overflowing. All these are curious speculations, not without interest to the inquiring mind.

A French Author, an Academian of some note, calculates that Adam was 123 feet 9 inches in height, Noah a little over 100 feet, Abraham 80, Moses 30, Hercules 10, Alexander 6, Cæsar less than 5. Progressing in this ratio, in a few years hence, the world will be filled with a race of Lilliputians.

The German Journals have some tables which prove that the distance between the earth and the sun is increasing annually by one thousandth part of that distance, and they argue from it that the increasing humidity of our summer and loss of fertility by the earth, is to be attributed solely to this circumstance. In the course of 6000 years from the present time, they assume the distance will be so great that only an eighth part of the warmth we now enjoy from the sun will be communicated to the earth, and that it will then be covered with eternal ice, in the same manner as we now see the plains of the north where the elephant formerly lived, and have neither spring nor autumn. No credit has hitherto been given to a tradition of the ancient Egyptians and Chinese, according to which those people formerly saw the sun's disc almost four times as large as we now see it; for they estimated the apparent diameter of the sun at double what it is seen in our days. If, however, we pay attention to the continued diminution of the apparent diameter of the sun, according to the best observations of several centuries, we must suppose that the ancients were not mistaken in the estimates which they have transmitted to us.

I HAVE NO TIME TO STUDY.

The idea about the want of time is a mere phantom. Franklin found time in the midst of all his labours to dive into the hidden recesses of philosophy, and to explore the untrodden path of science. The great Frederick, with an empire at his direction, in the midst of war, on the eve of battles which were to decide the fate of his kingdom, found time to revel in the charms of philosophy and intellectual pleasures. Bonaparte, with all Europe at his disposal; with kings in his antichamber begging for vacant thrones, with thousands of men whose destinies were suspended on the brittle thread of his arbitrary pleasures; had time to converse with books. Cæsar when he had curbed the spirits of the Roman people, and was thronged with visiters from the remotest kingdoms, found time for intellectual cultivation. Every man has time if he is careful to improve it; and if he does improve it as well as he might, he can reap a three-fold reward. Let mechanics then make use of the hours at their disposal, if they want to obtain a proper influence in society. They are the life-blood of the community: they can if they please hold in their hands the destinies of our republic; they are numerous, respectable, and powerful; and they have only to be educated half as well as other professions, to make laws for the nation.

POETRY.

THE LOVERS OF RUM.

I've mus'd on the mis'ries of life,
To find from what quarter they come,
Whence most of contention and strife,
Alas! from the *Lovers of Rum.*

I met with a fair one distress'd;
I ask'd whence her sorrows could come;
She replied, "I am sorely distress'd,"
My husband's a *Lover of Rum.*

I found a poor child in the street,
Whose limbs by the cold were all numb;
No stockings nor shoes on his feet;
His father's a *Lover of Rum.*

I went to collect a small debt,
The master was absent from home;
The sequel I need not relate—
The man was a *Lover of Rum.*

I met with a pauper in rags,
Who ask'd for a trifling sum;
I'll tell you the cause why he begs;
He once was a *Lover of Rum.*

I've seen men, from health, wealth, and ease
Untimely descend to the tomb;
I need not describe their disease,
Because they were *Lovers of Rum.*

Ask prisons and gallowses all
Whence most of their customers come—
From whom they have most of their calls—
They'll tell you the *Lovers of Rum.*

ITEMS OF INTELLIGENCE.

The failures of Calcutta since 1829 are estimated at *ninety-six millions five hundred thousand dollars.*

The most extensive *pearl* fishery in the world is at the two small islands of Bahrein and Arad, in the Persian Gulf carried on during the summer months by negro slaves trained for the purpose, who dive for the oysters ten to fifteen fathoms deep, and remain under water from two to five minutes. The produce is sometimes 150,000*l.* per annum. The Bahrein pearl is considered superior to that of Ceylon.

The *cap* worn by King Philip, the celebrated Indian warrior, has been recently presented to the cabinet of the Pilgrim Society by Mr. A. Wilbur of Raynham.

A Temperance Society has been formed in Dover, N. H. among the females engaged in the Mills in that place. It consists of more than 700 members. By the constitution, the members of this Society not only pledge themselves to total abstinence, but also to avoid dealing as far as practicable with traders who are engaged in the traffic of ardent spirits.

No ardent spirit is sold, either by the wholesale or retail, in the county of Liberty, Ga.

ALMANACK.

A calendar or table containing a list of the months and days, with an account of the rising and setting of the sun and moon, and other incidental matters. The Nautical Almanack, or Astronomical Ephemeris, is a kind of national almanack, begun in 1767, under the direction and by the advice of the astronomer royal, the late Rev. Dr. Maskelyne. Besides most things essential to general use, which are found in other almanacks, it contains many new and important matters, particularly the distance of the moon from the sun and fixed stars, computed to the meridian of Greenwich, for every three hours of time, for the purpose of computing the longitude at sea. This almanack is generally computed a few years forward, for the convenience of ships going out upon long voyages.

SECTION VII.

LITERATURE.

HISTORY OF WRITING.

Amongst the various arts and sciences which have from time to time contributed to the improvement and advancement of society, there is, perhaps, none which demands more justly the admiration and respect of mankind, none which, in point of utility and excellence, will at all admit of comparison with the art of Writing.

Yet because this art may now be acquired by every body, it fails to attract the attention and command the admiration it so well merits. That which is common is despised. How curious or beautiful soever a new discovery may be, let it once become common, and from that moment it ceases to be noticed. And this principle extends in full force to the arts and sciences; those which are new and rare are cherished and courted; those, perhaps, in reality more useful and worthy, but which are within the grasp of every body, are despised.

Time was, indeed, when the man who possessed this enviable accomplishment was distinguished highly above his fellows, and pointed out to notice as one who had made an achievement in science; but now, in these days of refinement and literature, who dares call himself accomplished because he can write? The time will soon come, when the man who cannot write his own name will stand a chance of acquiring celebrity merely from the rarity and singularity of the character.

In spite of all this, it would be difficult to mention an art which has gone through more stages in its journey to perfection, has more exercised the talents and ingenuity of mankind in its gradual development, or required a longer period of time to bring it to maturity; and it may, perhaps, not be uninteresting, to trace, as far as our limits will allow, its rise and progress.

Let us first of all obtain a definition of the term. Writing is an art by means of which we communicate to an absent person, or to posterity, the ideas or objects which present themselves to our minds; and in the present improved state of the art, this representation is made by means of arbitrary, yet fixed and defined signs, called letters.

In the first ages of the world, while society was in its infancy, mankind had clearly no other method of expressing their ideas in writing, than the simple one of making a figure or shape of the object. And this mode must have been long before their dispersion; for it has been found to exist, more or less, amongst the most rude, as well as the most polished, nations of the globe,—nations who, from their natural position, and their immense distance from the other civilized parts of the world, could not have held any intercourse with the rest of mankind.

The difficulty, however, and labour attached to this mode of writing, soon induced the people to be satisfied with the *outlines* only of the figure which expressed the object; and this method seems to have obtained in most, if not all, the nations of the earth. It was found in Mexico and Peru at the discovery of America, and, in some respects, exists to the present time in China.

But as this method of expressing objects, even by outlines, was still very troublesome, the Egyptians (for Egypt, be it remembered, was one of the earliest seats of every branch of art, literature, and science,) adopted another and more intellectual mode, and this was to substitute a kind of mark or simple character for the outlines of the object; these marks or characters still retained some resemblance to the figure made by the outlines, but they were less difficult, required less skill and much less trouble, and were therefore universally adopted. Yet even here, there was a great deal of intricacy; and no small degree of patience and skill was required, either to understand or make use of them. To simplify, therefore, the method of writing still further, the priests turned these outlines into arbitrary marks, which, although in the beginning they might still present a faint resemblance to the natural objects, in course of time deviated so much from their originals, as to render it almost impossible to trace them to their archetype, but which were nevertheless much less complicated, and more expeditious. And thus, after incredible labour, and the lapse of a vast period of time, were produced the three different modes of writing among the Egyptians, designated by the appellation of *hieroglyphic*, *demotic*, and *hieratic*. Into the nature and use of these, our limits do not permit us to enter more fully; they constitute a subject well worthy the attention of the scientific and curious, and which will well and abundantly repay the attention bestowed upon it.

We will therefore continue our inquiry, and proceed to the next step, and this was to form a connexion between the object represented by this hieroglyphical or picture-writing, and the *sound* (for as yet letters were not) of the word used to express it. Nor was this so difficult as would at first sight be supposed; for when a man represented any image or picture, that of "a door" for instance, he would naturally give to the combination of lines with which the figure was formed the name of "a door;" and wherever he met with this outline or representation, or even though he should change it for some arbitrary and more simple mark, having the same signification, the same name would still remain attached to it, and by this means the word "door" would for ever afterwards become associated with a certain outline or figure. The Hebrew alphabet affords a most satisfactory illustration of this. Every letter is, in fact, a word, and expresses some simple object. *Deleth*, for example, their fourth letter, corresponding with our D, signifies a "door;" *Beth*, their second letter, answering to our B, "a house;" *Gimel*, our G, "a camel;" *Jod*, or I, the "hand;" and this catalogue might be continued through the remaining letters, and thus it would seem that to each of them was attached a meaning.

Having attained this state of advancement, the progress of the art was more rapid. Every nation in its turn contributed some letters to the common stock; in a happy moment it was discovered, that each monosyllable terminated by a sound, which, with very little variation, was repeated in all. Nor was it difficult to ascertain the number of these sounds, which were invariably fixed to the four or five inflexions of voice. Thus were vowels added to consonants, and mankind gradually arrived at the greatest of all inventions, the invention of the Alphabet.

But who was the man, or what his nation to whom the honour of so noble an invention is due? This is a subject which has long divided the learned, and the variety of opinions upon it is in truth appalling: but the presumption appears to be strongest in favour of *Thoth*, a son or descendant of *Mizraim*, the father of the Egyptians. The Phœnician writer, Sanchoniathe, expressly attributes the formation of the *Sacred Characters* of the alphabet to this celebrated person. There is, moreover, a passage in Plato which, if rightly understood, and worthy of credit, should set the question at rest. He says, "That during the reign of Pharaoh Thamus, his secretary, Thouth or Theuth, came to lay before him the several discoveries he had made, amongst which was the invention of the alphabet, and he came to consult Pharaoh Thamus whether it ought to be made public."—*(London) Saturday Magazine.*

MYTHOLOGY.

PALES.

"Pales was the goddess of shepherds and pastures, Some call her Magna Mater and Vesta. To this goddess they sacrificed milk, and wafers made of millet, that she might make the pastures fruitful. They instituted the feasts called Palilia, or Parilia, to her honour, which were observed upon the eleventh or twelfth day of the calends of May by the shepherds in the field, on the same day in which Romulus laid the foundation of the city. These feats were celebrated to appease this goddess, that she might drive away the wolves, and prevent the diseases incident to cattle. The solemnities observed in the Palilian feasts were many: the shepherds placed little heaps of straw in a particular order, and at a certain distance; then they danced and leaped over them: then they purified the sheep and the rest of the cattle with the fume of rosemary, laurel, sulphur, and the like; as we learn from Ovid, who gives a description of the rites.

> "Great Pales, help; the past'ral rites I sing,
> With humble duty mentioning each thing.
> Ashes of calves and bean-straws oft I've held,
> With burnt purgations in a hand well fill'd.
> Thrice o'er the flame in order rang'd, I've leapt,
> And holy dew my laurel twig has dript."

FLORA.

"Flora is the goddess and president of flowers. The Romans gave her the honour of a goddess, but in reality she was a woman of infamous character, who, by her abominable trade, heaped up a great deal of money, and made the people of Rome her heir. She left a certain sum, the yearly interest of which was settled, that the games called Florales, or Floralia, might be celebrated annually, on her birth-day. But because this appeared impious and profane to the senate, they covered their design, and worshipped Flora under the title of "goddess of flowers;" and pretended that they offered sacrifice to her, that the plants and trees might flourish.

"Ovid follows the same fiction, and relates, that Chloris, an infamous nymph, was married to Zephyrus, from whom she received the power over all the flowers. But let us return to Flora and her games. Her image, as we find in Plutarch, was exposed in the temple of Castor and Pollux, dressed in a close coat, and holding in her right hand the flowers beans and peas. For while these sports were celebrated, the officers or ædiles scattered beans and other pulse among the people. These games were proclaimed and begun by sound of trumpet, as we find mentioned in Juvenal."

The feasts of the Floralia were noted for lewdness, the women celebrating them naked. Cato once entered the assembly; but the sight was too much for his unbending virtue; he retired with the utmost speed, from the shameful spectacle.

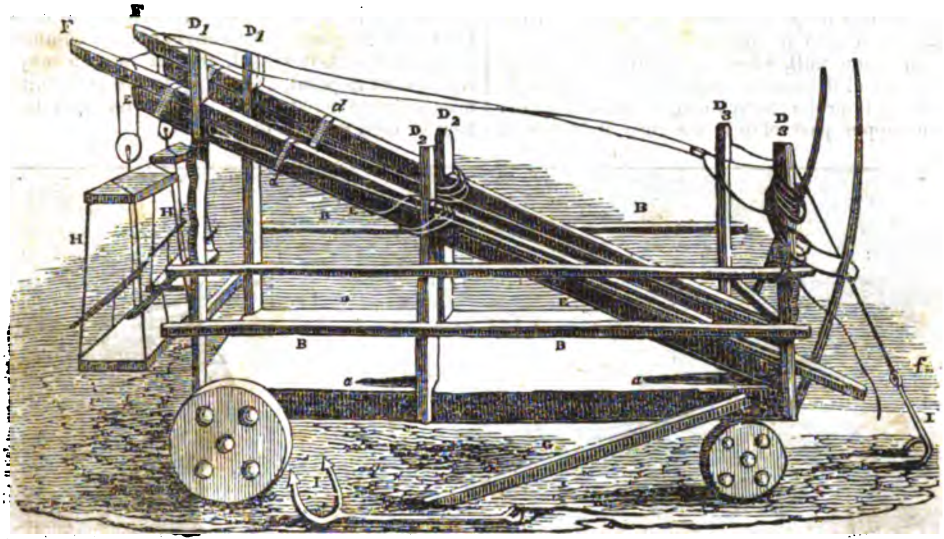
FERONIA.

"Feronia, the goddess of the woods, is justly placed near Flora, the goddess of flowers. She is called Feronia, from the care she takes in producing and propagating trees. The higher place is due to her, because fruits are more valuable than flowers, and trees than small and ignoble plants. It is said she had a grove sacred to her under the mountain Soracte: this was set on fire, and the neighbours were resolved to remove the image of Feronia thence, when on a sudden the grove became green again. Strabo reports that those who were inspired by this goddess used to walk barefoot upon burning coals without hurt. Though many believed that by the goddess Feronia, that kind of virtue only is meant by which fruit and flowers were produced.

POMONA.

"Pomona is the goddess, the guardian, the president, not of apples only, but of all the fruit and the product of trees and plants. She follows after Flora and Feronia in order; but in the greatness of her merit she far surpasses them, and has a priest who serves her only, called Flamen Pomonalis.

"Once when Pomona was very busy in looking after her gardens and orchards with great care, and was wholly employed in watering and securing the roots, and lopping the overgrown branches, Vertumnus, a principal god among the Romans, (called so because he had power to turn himself into what shape he pleased,) fell in love with Pomona, and counterfeited the shape of an old gray-headed woman. He came leaning on a staff into the gardens, admired the fruit and beauty of them, and commending her care about them, he saluted her. He viewed the gardens, and from the observations he had made, he began to discourse of marriage, telling her that it would add to the happiness even of a god, to have her to wife. Observe, says he, the trees which creep up this wall: how do the apples and plums strive which shall excel the other in beauty and colour! whereas, if they had not props or supports, which like husbands hold them up, they would perish and decay. All this did not move her, till Vertumnus changed himself into a young man; and then she also began to feel the force and power of love, and then received him with favour."



THE CLIFF WAGON, FOR THE PRESERVATION OF LIFE FROM SHIPWRECK.

As scarcely any of our readers are unconnected with, or uninterested in individuals who are occasionally exposed to the perils of shipwreck, we give a sketch of the *Cliff Wagon* for communicating with persons who have been wrecked, or have reached the shore, at the bottom of high cliffs, to whom there is not any access from the summit, or by boats, on account of the heaviness of the sea, and the rocky nature of the coast.

Attention was very painfully excited to the best means of rendering assistance on rocky and precipitous coasts to shipwrecked persons, when it was found, in the case of the Wilhelmina, a foreign vessel, that the Life-Boat, and Captain Manby's mortar apparatus, could not afford succour. The Wilhelmina, after a fearful suspense of many hours, in which there were occasional gleams of hope that she might escape, struck, and was speedily broken up against a detached rock, at some distance from the main cliffs, considerably to the southward of the entrance of the river Tyne. The labourers of the adjacent farms, and others, were watching her, with such ropes as they could procure. A portion of the wreck conveying five persons drove in shore, and was brought by the wind into a bay: they seemed to have escaped: a subsequent wave carried them back into destruction. Though the cliff was not very high, there was not any path or descent, and the ropes were not strong enough to allow of lowering by them the men, amongst the anxious bystanders, who earnestly desired to make the dangerous experiment. In their sight, the whole crew of the Wilhelmina, including a woman and an infant child, perished.*

The Cliff Wagon was invented by Mr. James Davison, master mariner, of Whitburn, near Sunderland, who was for some time very active in charge of the Life-boat, at Redcar, near the mouth of the river Tees, and has since been in the superintendence of the establishment at Whitburn, for the preservation of life from shipwreck. The machine here described was built under the direction and at the expense of the Whitburn Establishment for the preservation of life from shipwreck.

It is a platform *a a*, 14 feet 9 inches, by 6 feet, made of 1½ inch deal planks, guarded by rails B B at the sides and one end, moving on four wheels by one or two horses, with a shaft like a common wagon. Three strong uprights D D D, on *each* side, each 10 inches by 2½ thick, support an inclined beam E E, 17 feet long, and 6 inches by 5, on rollers, upon which works a sliding lever F F, 21 feet long, of the same dimensions as the supporting beam E E; they are connected by hoops *d d*, and pass through the tops of the uprights D 1, D 2, and through the bottom D 3. At the extremity F of each lever, is suspended, by means of blocks and the strongest patent rope, made of whale-line, a sling or seat; the ropes connected with which pass through a sheaf or block in the end F, of each lever, and of the upright D 3; and thus, by the assistance of a few men, four or more persons with ropes, life-buoys, &c. &c. may be lowered down at the same time, from the top of the inaccessible cliff, to the aid of the unfortunate mariners below. One swing may remain down, if required, for the security of the men, when the sea beats upon the base of the cliffs; into the other swing, they can put each person as they rescue them from the waves. For women and children, or men who may be injured or exhausted, a strong wicker basket has been provided, to be substituted for the swing, in which they may be laid at length, and carried when laid to the summit of the cliff, without the pain of further removal, to the nearest house. The ordinary sling is provided with a strong strap to buckle round the waist, and will, with the person saved, convey a man to take care of him.

When called into service, the wagon is backed as near to the edge of the most perpendicular part of the cliff as may be deemed sufficiently solid to bear the weight of it. It is made fast by letting down the spur-shores, or stays, G, 7 feet long and 2½ inches thick, at each side of the platform, and which must work deeper and deeper into the earth, if the wagon moves. The wheels are sunk, and it is moored by two strong grapnells, or devil's claws, from the tops of D 3, carried out as far as may be necessary, I I, and by loading it with stones &c. If any cause of apprehension exist, the horses which drew the wagon may remain attached to the shaft, and the men employed in raising and lowering the swings may stand on the grapnell ropes.

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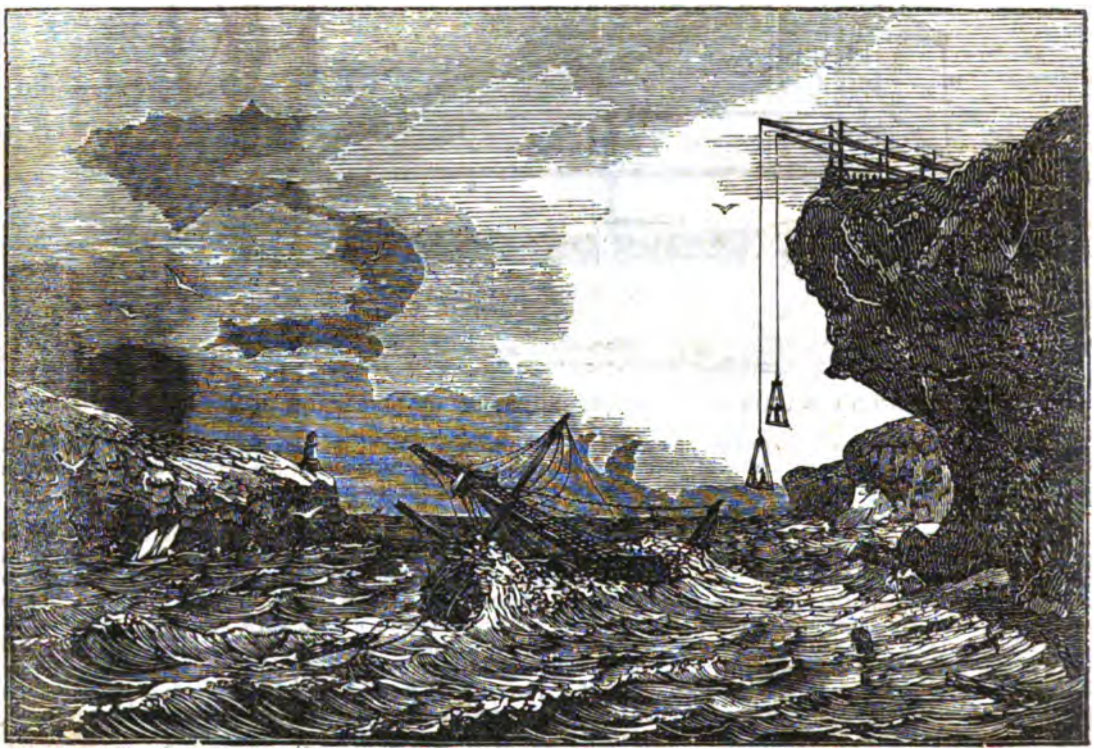
* Their bodies were eventually found, and buried with the rites of the Church of England, in Whitburn churchyard.

The uprights D, at the lever ends F, are each 7 feet 6 inches high; the two others on each side are 5 feet high. The levers F F, may not only be extended so as to allow for unseen projecting parts on the face of the cliff, but may be drawn in again, merely by the continuance of the same pull, which raised the swing from the bottom of the cliff, so as to land the persons brought up. Each lever is projected by means of a block at the inside of the upper part of D 1, the rope from which passes through a sheaf in the lower end *f* of the lever, and is made fast at the outside of D 1. The levers are secured at the extension required, by a turn of the rope round a strong rail across the wagon from D 2 to D 2.

The extreme outside width of the wagon, including the wheels, is eight feet, which allows it to pass through any ordinary gateway. The side-rails, B B, are 2½ inches square; the iron rail H, at the cliff, or lever end, (to prevent men from falling over in their earnestness to render help, and land the sufferers as they come up,) is 1½ inch thick. The platform contains a well, or wells, to carry the necessary tools, as spades, pick-axes, mallet, hammer, spare ropes, &c. Captain Manby's mortar apparatus may be conveyed in the wagon, and lodged at the place most convenient for communicating with the wrecked vessel, and the wagon may proceed from point to point, according to the probability which may seem to exist, as to the precise spot to which a boat or men may be driven.



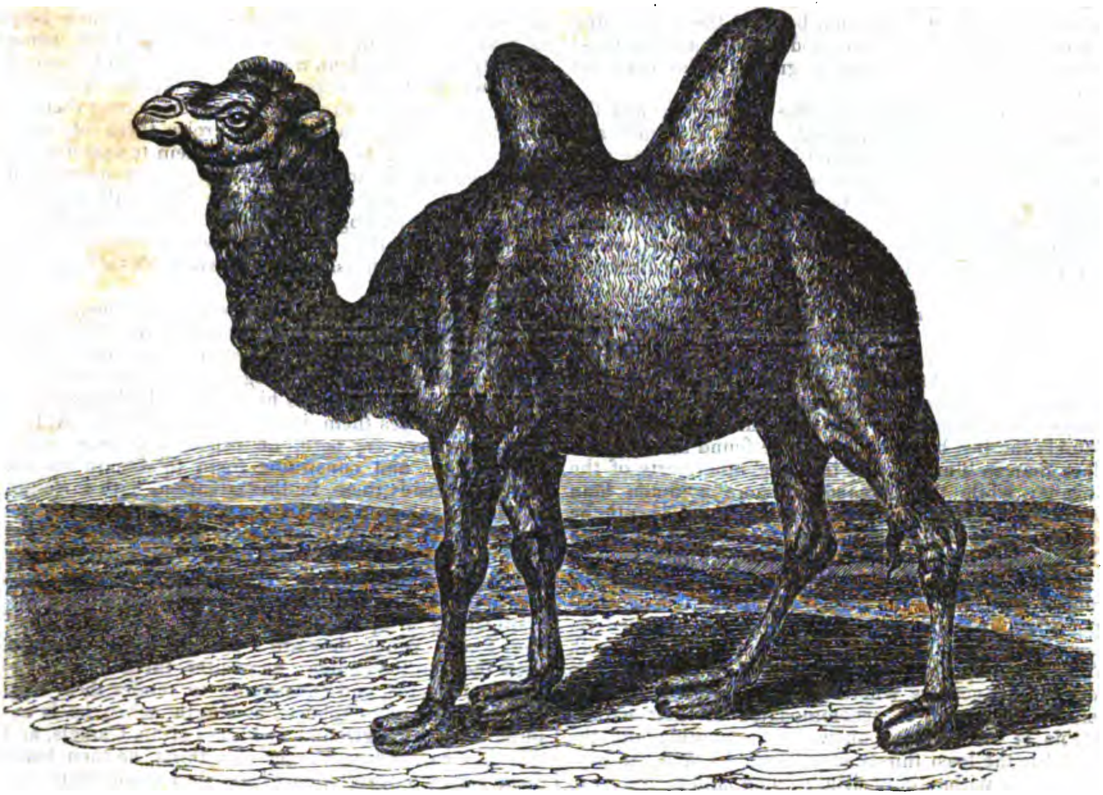
COMMUNICATION WITH A SHIP IN DISTRESS BY MEANS OF THE CLIFF WAGON.

The Cliff Wagon possesses almost every quality which can recommend any invention destined to a similar purpose. That built at Whitburn was completed and painted for about 40*l*. ropes included; it was made by the village workmen. There is not in it any thing intricate—any springs or nice mechanism which may be deranged—any thing which rapidly decays, or cannot be readily replaced;—not any thing, in short, which is not available for the exertion of the simple physical power of any men who can be brought together. If the materials of which the Cliff Wagon is formed be substantial, no caution is required beyond that of securely fixing it in its position on *sound* ground at the edge of the cliff, and *steadiness and slowness in lowering and raising the slings;* too great exertion of strength in pulling causes the levers to play too much, and materially increases any previously unseen danger from projections on the face of the cliffs.

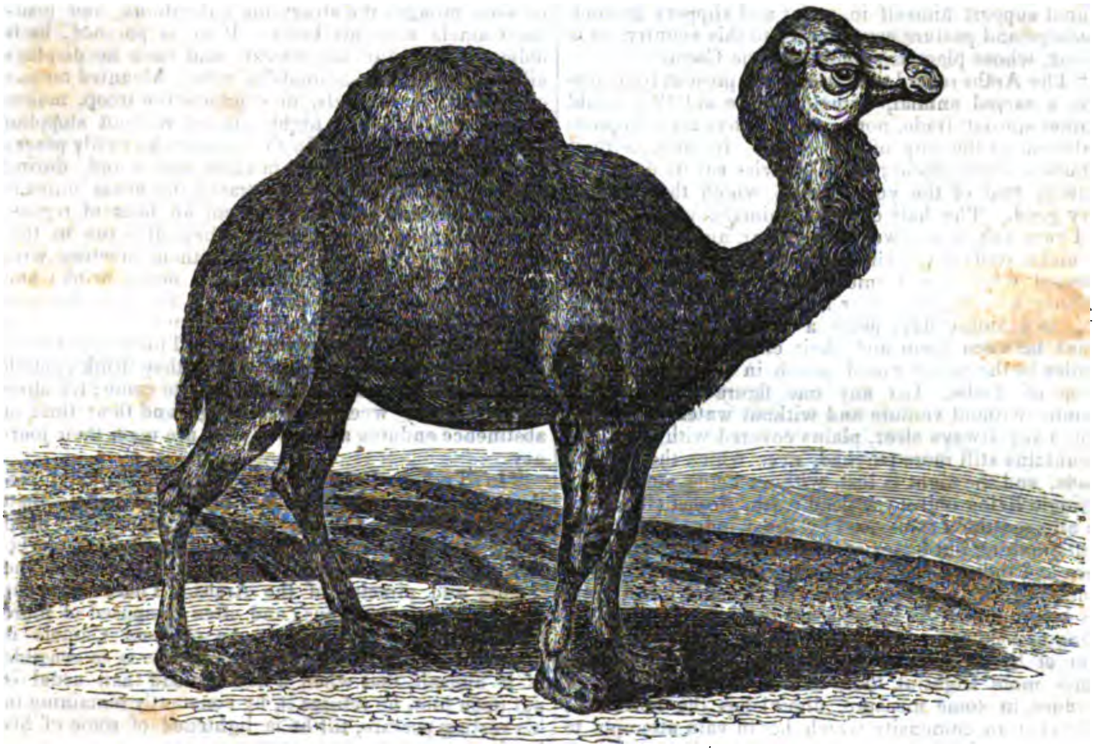
A model of the Cliff Wagon, made, as well as many others, by the inventor, now in his eighty-second year, is to be placed in the National Gallery, in Adelaide-street, Strand, where it is hoped it will attract the attention of those friends of humanity who may have it in their power to recommend it to the committees and associations for the preservation of life from shipwreck within whose districts are portions of steep cliffs, on which vessels have been lost.

The Royal George was wrecked at Spithead in 1782. When first she filled, she fell over so as to dip the flag at her mast-head in the sea; then rolling back, she fell over to the other side till her yard-arms touched the water; she then righted and sunk nearly upright. While she was sinking, nearly every soul on board came on deck; and I was told by Admiral Sotheby, then a lieutenant on board the next ship, that, as she went down, this mass of people gave a cry so lamentable, that it was still ringing in his ears. It was supposed that at the time of the accident, above 1000 persons, men and women, were on board;—not 400 were saved. The eddy of the sinking ship was so great, that a large victualling-barge, which lay along side, was drawn in, and lost with her.—*Lond. Sat. Mag.*

NATURAL HISTORY.



THE CAMEL.



THE DROMEDARY.

"These two names do not include two different species, but only indicate two distinct breeds, subsisting from time immemorial, in the Camel species. The principal, and, as may be said, the only perceptible character by which they differ, consists in the Camel's bearing two bunches or protuberances, and the Dromedary only one. The latter is also much less, and not so strong as the Camel; but both of them herd and procreate together; and the production from this cross breed is more vigorous, and of greater value than the others.

"This mongrel issue from the Dromedary and the Camel forms a secondary breed, which also mix and multiply with the first; so that in this species, as well as in that of other domestic animals, there are to be found a great variety, according to the difference of the climates they are produced in. Aristotle has judiciously marked the two principal breeds; the first (which has two bunches) under the name of the Bactrian Camel; and the second, under that of the Arabian Camel; the first are called Turkman, and the other Arabian Camels. This division still subsists, with this difference only, that it appears, since the discovery of those parts of Africa and Asia which were unknown to the ancients, that the Dromedary is, without comparison, more numerous and more universal than the Camel; the last being seldom to be found in any other place than in Turkey, and in some other parts of the Levant; while the Dromedary, more common than any other beast of his size, is to be found in all the northern parts of Africa, in Egypt, in Persia, in South Tartary, and in all the northern parts of India.

"The Dromedary, therefore, occupies an immense tract of land, while the Camel is confined to a small spot of ground; the first inhabits hot and parched regions; the second a more moist and temperate soil. The Camel appears to be a native of Arabia; for it is not only the country where there are the greatest number, but is also best accommodated to their nature. Arabia is the driest country in the world; and the Camel is the least thirsty of all animals, and can pass seven days without any drink. The land is almost in every part dry and sandy: the feet of the Camel are formed to travel in sand; while on the contrary, he cannot support himself in moist and slippery ground. Herbage and pasture are wanting to this country, as is the ox, whose place is supplied by the Camel.

"The Arabs regard the Camel as a present from heaven, a sacred animal, without whose aid they could neither subsist, trade, nor travel. It has been emphatically called the ship of the desert. Its milk is their common nourishment; they likewise eat its flesh, especially that of the young ones, which they reckon very good. The hair of these animals, which is fine and very soft, is renewed every year, and serves them to make stuffs for their clothing and their furniture. Blessed with their Camels, they not only want for nothing, but they even fear nothing. With them they can, in a single day, place a tract of desert of fifty miles between them and their enemies, and all the armies in the world would perish in the pursuit of a troop of Arabs. Let any one figure to himself a country without verdure and without water, a burning sun, a sky always clear, plains covered with sand, and mountains still more parched, over which the eye extends, and the sight is lost, without being stopped by a single living object; a dead earth, *flayed* (if I may be allowed the expression) by the winds, which presents nothing but bones of dead bodies, flints scattered here and there, rocks standing upright or overthrown; a desert entirely naked, where the traveller never drew his breath under the friendly shade; where he has nothing to accompany him, and where nothing reminds him of living nature; an absolute void a thousand times more frightful than that of the forest, whose verdure, in some measure, diminishes the horrors of solitude; an immensity which he in vain attempts to overrun; for hunger, thirst, and burning heat, press on him every weary moment that remains between despair and death.

'Nevertheless, the Arab has found means to surmount these difficulties, and even to appropriate to himself these gaps of Nature; they serve him for an asylum; they secure his repose, and maintain him in his independence. But why does not man know how to make use of them without abuse? This same Arab, free, independent, tranquil, and even rich, instead of respecting those deserts as the ramparts of his liberty, soils them with guilt: he traverses over them to the neighbouring nations, and robs them of their slaves and gold: he makes use of them to exercise his robberies, which unfortunately he enjoys more than his liberty; for his enterprises are almost all successful: notwithstanding the caution of his neighbours, and the superiority of their forces, he escapes their pursuit, and, unpunished, bears away all that he has plundered them of.

"An Arab who destines himself to this business of land piracy, early hardens himself to the fatigue of travelling: he accustoms himself to pass many days without sleep; to suffer hunger, thirst, and heat; at the same time he instructs his Camels, he brings them up, and exercises them in the same method. A few days after they are born, he bends their legs under their bellies, and constrains them to remain on the earth, and loads them, in this situation, with a weight as heavy as they usually carry, which he only relieves them from to give them a heavier. Instead of suffering them to feed every hour, and drink even when they are thirsty, he regulates their repasts, and, by degrees, increases them to greater distances between each meal, diminishing also, at the same time, the quantity of their food. When they are a little stronger, he exercises them to the course; he excites them by the example of horses, and endeavours to render them also as swift, and more robust; at length, when he is assured of the strength and swiftness of his Camels, and that they can endure hunger and thirst, he then loads them with whatever is necessary for his and their subsistence. He departs with them, arrives unexpectedly at the borders of the desert, stops the first passenger he sees, pillages the straggling habitations, and loads his Camels with his booty. If he is pursued, he is obliged to expedite his retreat; and then he displays all his own and his animals' talents. Mounted on one of his swiftest Camels, he conducts the troop, makes them travel day and night, almost without stopping either to eat or drink. In this manner he easily passes over three hundred miles in eight days; and, during all that time of fatigue and travel, he never unloads his Camels, and only allows them an hour of repose, and a ball of paste each day. They often run in this manner for eight or nine days without meeting with any water, during which time they never drink; and when by chance they find a pool at some distance from their route, they smell the water at more than half a mile before they come to it. Thirst now makes them redouble their pace; and then they drink enough for all the time past, and for as long to come; for often they are many weeks in travelling; and their time of abstinence endures as long as they are upon their journey.

"In Turkey, Persia, Egypt, Arabia, Barbary, &c. they use no other carriage for their merchandise than Camels, which is, of all their conveyances, the most ready and the cheapest. Merchants and other travellers assemble themselves in caravans, to avoid the insults and piracies of the Arabs. These caravans are often very numerous, and often composed of more Camels than men. Every one of these Camels is loaded according to his strength; and he is so sensible of it himself, that when a heavier load than usual is put upon him, he refuses it, by constantly remaining in his resting posture, till he is lightened of some of his burthen.

"Large and strong Camels generally carry a thousand, and even twelve hundred weight; the smaller only six or seven hundred. In these commercial jour-says, they do not travel quick; and, as the route is often seven or eight hundred miles, they regulate their stages; they only walk, and go every day ten or twelve miles; they are disburthened every evening, and are suffered to feed at liberty. If they are in a part of the country where there is pasture, they eat enough in one hour to serve them twenty-four, and to ruminate on during the whole night; but they seldom meet with pastures, and this delicate food is not necessary for them: they even seem to prefer wormwood, thistles, nettles, furze, and other thorny vegetables, to the milder herbs; and so long as they can find plants to brouse on, they very easily live without any drink.

"This facility with which they abstain so long from drinking, is not pure habit, but rather an effect of their formation. Independent of the four stomachs that are commonly found in ruminating animals, the Camel is possessed of a fifth bag, which serves him as a reservoir to retain the water. This fifth stomach is peculiar to the Camel. It is of so vast a capacity as to contain a great quantity of liquor, where it remains without corruption, or without the other aliments being able to mix with it. When the animal is pressed with thirst, or has occasion to dilute the dry food, and to macerate it for rumination, he causes a part of this water to reascend into the stomach, and even to the throat, by a simple contraction of the muscles.

"This animal bears about him all the marks of slavery and pain; below the breast, upon the sternum, is a thick and large callosity, as tough as horn; the like substance appears upon the joints of the legs; and although these callosities are to be met with in every animal, yet they plainly prove that they are not natural, but produced by an excessive constraint and pain, as appears from their being often found filled with pus. It is therefore evident, that this deformity proceeds from the custom to which these animals are constrained, of forcing them, when quite young, to lie upon their stomach with their legs bent under them, and in that cramped posture to bear not only the weight of their body, but also the burthens with which they are laden. These poor animals must suffer a great deal, as they make lamentable cries, especially when they are overloaded; and, notwithstanding they are continually abused, they have as much spirit as docility. At the first sign they bend their legs under their bodies, and kneeling upon the ground, they are unloaded, without the trouble of lifting up the load to a great height, which must happen, were they to stand upright. As soon as they are loaded, they raise themselves up again without any assistance or support; and the conductor, mounted on one of them, precedes the whole troop, who follow him in the same pace as he leads. They have neither need of whip or spur to excite them; but, when they begin to be fatigued, their conductors support their spirits, or rather charm their weariness, by a song, or the sound of some instrument. When they want to prolong the route, or double the day's journey, they give them an hour's rest; after which, renewing their song, they again proceed on their way for many hours more; and the singing continues until the time that they stop. Then the camels again kneel down on the earth, to be relieved from the burthen, by the cords being untied, and the bales rolled down on each side. They remain in this cramped posture, with their belly couched upon the earth, and sleep in the midst of their baggage, which is tied on again the next morning with as much readiness and facility as it was untied before they went to rest. These are, however, not their only inconveniences: they are prepared for all these evils by one still greater; by mutilating them by castration while young. They leave but one male for eight or ten females; and all the labouring Camels are commonly gelt; they are weaker, without doubt, than those which are not castrated; but they are more tractable than the others, who are not only indocile, but almost furious, in the rutting time, which remains forty days, and which happens every spring of the year. The female goes with young exactly a year, and, like all other large animals, produces but one at a birth. They have great plenty of milk, which is thick, and nourishing even for the human species, if it is mixed with more than an equal quantity of water. The females seldom do any labour while they are with young, but are suffered to bring forth at liberty. The profit which arises from their produce, and from their milk, perhaps surpasses that which is got from their labour; nevertheless, in some places, a great part of the females undergo castration, as well as the males, in order to render them more fit for labour. In general, the fatter the Camels are, the more capable they are of enduring great fatigues. Their hunches appear to be formed only by the superabundance of nourishment: for, in long journeys, where they are obliged to stint them in their food, and where they suffer both hunger and thirst, these hunches gradually diminish, and are reduced almost even; and the eminences are only discovered by the height of the hair, which is always much longer upon these parts than upon any other part of the back.

"The young Camel sucks his mother a year; and when they want to bring him up so as to make him strong and robust, they leave him at liberty to suck or graze for a longer time, nor begin to load him, or put him to labour, till he has attained the age of four years. The Camel commonly lives forty or fifty years.

"The Camel is not only of greater value than the elephant, but perhaps not of less than the horse, the ass, and the ox, all united together. He alone carries as much as two mules; he not only also eats less, but likewise feeds on herbs as coarse as the ass. The female furnishes milk a longer time than the cow; the flesh of young Camels is good and wholesome, like veal; their hair is finer, and more sought after than the finest wool; there is not a part of them, even to their excrements, from which some pofit is not drawn; for sal ammoniac is made from their urine; their dung, when dried and powdered, serves them for litter, as it does for horses, with whom they often travel into countries where neither straw nor hay is known. In fine, a kind of turf is also made of this dung, which burns freely, and gives a flame as clear, and almost as lively, as that of dry wood; even this is another great use, especially in deserts, where not a tree is to be seen, and where, from the deficiency of combustible matters, fire is almost as scarce as water.'

VAGARIES OF IMAGINATION.

It is well known how a man was cured who fancied that he was dead, and refused all sustenance. His friends deposited him with all due formalities in a dark cellar. One of them caused himself soon afterwards to be carried into the same place in a coffin, containing a plentiful supply of provisions, and assured him that it was customary to eat and drink in that world, as well as in the one which they had just left. He suffered himself to be persuaded, and recovered.—Another, who imagined that he had no head, (a notion that is not so common as the reverse,) was speedily convinced of the real existence of his head, by a heavy hat of lead which, by its pressure, made him feel for the first time, during a long period, that he actually possessed this necessary appendage. But the most dangerous state of all is, when the imagination fixes upon things the lively representation of which may finally induce their realization. Of this sort was a case which fell under my own professional experience, and which affords one of the most striking proofs of the power of an overstrained imagination.

A youth of sixteen, of a weekly constitution and delicate nerves, but in other respects quite healthy, quitted his room in the dusk of the evening, but suddenly returned, with a face pale as death, and looks betraying the greatest terror, and in a tremulous voice told a fellow-student who lived in the same room with him, that he should die at nine o'clock in the morning of the day after the next. His companion naturally considered this sudden transformation of a cheerful youth into a candidate for the grave as very extraordinary: he inquired the cause of this notion, and, as the other declined to satisfy his curiosity, he strove at least to laugh him out of it. His efforts however were unavailing. All the answer he could obtain from his comrade was, that his death was certain and inevitable. A number of well-meaning friends assembled about him, and endeavoured to wean him from his idea by lively conversation, jokes, and even satirical remarks. He sat among them with a gloomy, thoughtful look, took no share in their discourse, sighed, and at length grew angry when they began to rally him. It was hoped that sleep would dispel this melancholy mood; but he never closed his eyes, and his thoughts were engaged all night with his approaching decease. Early next morning I was sent for. I found, in fact, the most singular sight in the world—a person in good health, making all the arrangements for his funeral, taking an affecting leave of his friends, and writing a letter to his father, to acquaint him with his approaching dissolution, and to bid him farewell. I examined the state of his body, and found nothing unusual but the paleness of his face, eyes dull and rather inflamed with weeping, coldness of the extremities, and a low contracted pulse—indications of a general cramp of the nerves, which was sufficiently manifested in the state of his mind. I endeavoured, therefore, to convince him, by the most powerful arguments, of the futility of his notion, and to prove that a person whose bodily health was so good, had no reason whatever to apprehend speedy death: in short, I exerted all my eloquence and my professional knowledge, but without making the slightest impression. He willingly admitted that I, as a physician, could not discover any cause of death in him, but this, he contended, was the peculiar circumstance of his case, that without any natural cause, merely from an unalterable decree of fate, his death must ensue; and though he could not expect us to share this conviction, still it was equally certain that it would be verified by the event of the following day. All that I could do, therefore, was to tell him, that under these circumstances I must treat him as a person labouring under a disease, and prescribe medicines accordingly. "Very well," replied he, "but you will see not only that your medicines will not do me any good, but that they will not operate at all."

There was no time to be lost, for I had only twenty-four hours left to effect a cure. I therefore judged it best to employ powerful remedies in order to release him from this bondage of his imagination. With this view a very strong emetic and cathartic were administered, and blisters applied to both thighs. He submitted to every thing, but with the assurance that his body was already half dead, and the remedies would be of no use. Accordingly, to my utter astonishment, I learned, when I called in the evening, that the emetic had taken but little or no effect, and that the blisters had not even turned the skin red. He now triumphed over our incredulity, and deduced from this inefficacy of the remedies the strongest conviction that he was already little better than a corpse. To me the case began to assume a very serious aspect. I saw how powerfully the state of the mind had affected the body, and what a degree of insensibility it had produced; and I had just reason to apprehend that an imagination which had reduced the body to such extremity, was capable of carrying matters to still greater lengths.

All our inquiries as to the cause of his belief had hitherto proved abortive. He now disclosed to one of his friends, but in the strictest confidence, that the preceding evening, on quitting his room, he had seen a figure in white, which beckoned to him, and at the same moment a voice pronounced the words—"The day after to-morrow, at nine in the morning, thou shalt die!" and the fate thus predicted nothing could enable him to escape. He now proceeded to set his house in order, made his will, and gave particular directions for his funeral, specifying who were to carry, and who to follow him to the grave. He had insisted on receiving the sacrament—a wish, however, which those about him evaded complying with. Night came on, and he began to count the hours he had yet to live, till the fatal nine the next morning, and every time the clock struck, his anxiety evidently increased. I began to be apprehensive for the result; for I recollected instances in which the mere imagination of death had really produced a fatal result. I recollected also the feigned execution, when the criminal, after a solemn trial, was sentenced to be beheaded, and when, in expectation of the fatal blow, his neck was touched with a switch, on which he fell lifeless to the ground, as though his head had been really cut off: and this circumstance gave me reason to fear that a similar result might attend this case, and that the striking of the hour of nine might prove as fatal to my patient as the blow of the switch on the above-mentioned occasion. At any rate, the shock communicated by the striking of the clock, accompanied by the extraordinary excitement of the imagination and the general cramp which had determined all the blood to the head and the internal parts, might produce a most dangerous revolution, spasms, fainting-fits, or hæmorrhages; or even totally overthrow reason, which had already sustained so severe an attack.

What was then to be done? In my judgment, every thing depended on carrying him, without his being aware of it, beyond the fatal moment; and it was to be hoped that as his whole delusion hinged upon this point, he would then feel ashamed of himself and be cured of it. I therefore placed my reliance on opium, which, moreover, was quite appropriate to the state of his nerves, and prescribed twenty drops of laudanum, with two grains of hen-bane, to be taken about midnight. I directed that if, as I hoped, he overslept the fatal hour, his friends should assemble round his bed, and on his awaking, laugh heartily at his silly notion, that, instead of being allowed to dwell upon the gloomy idea, he might be rendered thoroughly sensible of its absurdity. My instructions were punctually obeyed: soon after he had taken the opiate, he fell into a profound sleep, from which he did not awake till about eleven o'clock the next day. "What hour is it?" was the first question on opening his eyes; and when he heard how long he had overslept his death, and was at the same time greeted with loud laughter for his folly, he crept ashamed under the bed clothes, and at length joined in the laugh, declaring that the whole affair appeared to him like a dream, and that he could not conceive how he could be such a simpleton. Since that time he has enjoyed the best health, and has never had any similar attack.—*London Mirror.*

LAND REMAINS.

A term applied to remains of animals and vegetables, found in many places, on digging in the earth, mostly interchanged with strata of marine remains. They consist of bones of animals, or vegetables, whose species chiefly are extinct, or whose genera now flourish in warmer climates, the bones being often of animals of enormous size, either because such were common, or because they have endured longer. Vegetables, in particular, are often found imbedded in coals, and coal-seams are in general considered as consolidations of ancient forests. In Iceland, a forest was lately found with the trees erect, 50 or 60 feet below the surface of the earth, and prostrate forests have been found in Lancashire and Lincolnshire, in England. All the appearances are perfectly consistent with the mosaic record.

SECTION VIII.

HISTORY.

CANAAN.

This country, so celebrated in sacred story, was settled by the posterity of Canaan, the son of Ham. The sons of Canaan mentioned in scripture were these: Sidon his first born, and Heth, and the Jebusite, and the Amorite, and the Girgasite, and the Hivite, and the Arkite, and the Sinite, and the Zemarite, and the Hamathite. All these were born before the Dispersion. "Afterwards," says scripture, "were the families of the Canaanites spread abroad. And the border of the Canaanites was from Sidon, as thou comest to Gerar, unto Gaza; as thou goest unto Sodom, and Gomorrah, and Admah, and Zeboim, even unto Lasha."

The Canaanites were divided into tribes, seven in number according to some, but nine according to others. These were the people on whom rested the Divine malediction uttered by Noah against Canaan; which malediction they were made to realize when the Israelites took possession of their land, as will be seen in its place.

The Canaanites appear to have been shepherds, husbandmen, soldiers, artisans, merchants, or sailors, according to the nature and condition of the portion of the country which they chanced to inhabit. Each tribe was governed by a king; although the tribes collectively appear to have formed a general confederacy. The kings were rather of the patriarchal, than of the despotic kind. Public affairs were regulated in public assemblies of the people themselves. As to their religion, the knowledge of the true God was preserved amongst them for no inconsiderable period; for even in the time of Abraham, Melchizedec, the king of Salem, was a priest of the Most High God.

But little, however, can be expected in the historical line, relative to the infant period of this or any other of those early nations. They were too inconsiderable in population, and in every other respect, to make any great figure on the stage of the world. The most that can be done is, not to lose sight of them, but to trace them from their origin down to a period when they acted a more conspicuous part. We will therefore leave the Canaanites for the present, with this very brief notice, and turn our attention for a few moments to

PALESTINA.

The Philistines were descendants of Ham. Philistim, from whom they derived their name, was a son of Casluhim, one of the sons of Mizraim, the son of Ham. There is some reason for supposing that the Philistines were a colony from Egypt.

The chiefs of this people had at first but very limited power, their government being a kind of aristocracy, and not a monarchy. Their chiefs were elective. The invention of the bow and arrow is attributed to them. Among them were giants, or men of extraordinary stature. Like other nations at their outset, they had some knowledge of the true religion, which they received from their fathers, who had opportunities of conversing with Noah and his sons. This knowledge they retained for some time, as appears from the fact that in the time of Isaac, Abimelech, the king of Gerar, so feared God as to be deterred from taking Rebecca, Isaac's wife, from him.

Palestina was most charmingly situated. On the coast it was level; but as it receded thence, it rose gradually into fertile hills and mountains, from whose summits spread out to the eye landscapes of exquisite beauty. From these mountains descended numerous rivulets, which watered the plains below. The climate was mild and temperate. In short, nothing seemed wanting to render it one of the most delightful countries on the earth. It derived the name of Palestine from its inhabitants, the Philistines; which name has been finally applied to the whole country occupied by the Jews as well as by them.

SYRIA.

Syria is a country containing lofty mountains, fertile plains, noble rivers, and dreary deserts. While the summits of its mountains are stiffened with frost or crowned with snow, other portions of the country languish with sultry heat. But this diversity, these extremes of heat and cold, produce in the intermediate parts an agreeable temperature. Refreshing breezes play among the hills situated at the bases of those mountains, and following the courses of the rivers, invigorate and exhilarate the inhabitants of that delightful region.

The primitive Syrians were the descendants of Aram, the youngest son of Shem; although in time they were intermingled with several families of the Canaanites, who sought among them an asylum from the sword of the Israelites.

Syria was at first divided into petty kingdoms. And indeed, this appears to have been the case with almost all the countries inhabited in those early times. A kingdom in those days would hardly constitute a province of the smallest kind in our own. In fact, it would seem that a city, or more properly, a town or village, was sometimes denominated a kingdom.

The Syrians from the very first were noted for effeminacy and imbecility, resembling more the female than the male sex, both in deportment and practice. This feature in their character is partly attributable to their climate, and partly to their system of religion, which was one of the most profligate and debauching ever known. But more on this point in its proper place. We will next consider

PHŒNICIA.

This famous country of olden times was a fertile tract of country, stretching along the eastern coast of the Mediterranean, and enjoying every possible advantage for commerce. Its harbours were numerous, spacious, and secure. Lebanon supplied timber in abundance for the building of ships. And its position in relation to the various commercial countries of the Mediterranean was all that could be desired to facilitate commercial intercourse. No wonder, then, that in process of time, Phœnicia should become the commercial bond of connexion between the three quarters of the world.

Sidon, one of the chief cities of Phœnicia, was built by Sidon, a son of Canaan. He was its first sovereign. But it was not till a period later than we are now considering, that this city or any part of Phœnicia attained to notoriety worthy of the historic page. We therefore merely introduce it here, and leave it for future notice.

We have already traced the patriarchal line from Adam downward to Peleg, in whose time the earth was divided. We will now continue this genealogy to Abraham.

Peleg was born 101 years after the Flood. At the age of thirty, he had a son born to him by the name of Reu; and having attained to the age of 239 years, he died. Reu was thirty-two years old when his son Serug was born, and died at the age of 239. Serug was 30 years old at the birth of Nahor his son, and died at the age of 230. Nahor was 29 years of age when his son Terah was born, and lived to the age of 148.* At the age of 70, Terah had three sons, Abram (or Abraham,) Nahor, and Haran. Thus it appears that Abraham was born 192 years after the Flood, which was 1848 years after the Creation, and 2156 before Christ.

Terah, the father of Abraham, dwelt at Ur of the Chaldees. Here he continued with his family till after the death of his son Haran, who was the father of Lot. Abraham took a wife by the name of Sarai, who was his half-sister; and Nahor also married one named Milcah, the daughter of Haran his brother.

In process of time, “ Terah took Abram his son, and Lot, the son of Haran, his son's son, and Sarai, his daughter-in-law, his son Abram's wife; and they went forth with them from Ur of the Chaldees, to go into the land of Canaan; and they came unto Haran, and dwelt there.” In that place Terah spent the remainder of his days, and died at the age of 205 years.

CALL OF ABRAHAM.

“ Now the Lord said unto Abram, get thee out of thy country, and from thy kindred, and from thy father's house, unto a land that I will shew thee: and I will make of thee a great nation, and I will bless thee, and make thy name great; and thou shalt be a blessing: and I will bless them that bless thee, and curse them that curseth thee: and in thee shall all families of the earth be blessed. So Abram departed, as the Lord had spoken unto him: and Lot went with him: and Abram was seventy and five years old when he departed out of Haran. And Abram took Sarai his wife, and Lot his brother's son, and all their substance that they had gathered, and the souls that they had gotten in Haran: and they went forth to go into the land of Canaan; and into the land of Canaan they came.”

Having reached this point, which limits the historical period that we are now considering, we will conclude at this time by introducing the following notice of Abraham from Berosus the Chaldean historian.

“ After the Deluge, in the tenth generation, was a certain man among the Chaldeans renowned for his justice and great exploits, and for his skill in the celestial sciences.”—*Euseb. Præp. Evan.* lib. 9.

LITERATURE.

HISTORY AND MANUFACTURE OF WRITING PAPER.

Various are the materials on which mankind, in different ages and countries, have contrived to write their sentiments; as on stones, bricks, the leaves of herbs and trees, and their rinds and barks; also on tables of wood, wax, and ivory; to which may be added, plates of lead, linen, rolls, &c. At length the Egyptian papyrus was invented; then parchment, cotton paper, and lastly, the common or linen paper. In some places and ages they have written on the skins of fishes; in others on the intestines of serpents; and in others on the backs of tortoises. There are few sorts of plants but have at some time been used for paper and books; and hence the several terms, *biblos*, *codex*, *liber*, *folium*, *tabula*, *tillura*, *sheda*, *&c.* which express the several parts on which they were written. In Ceylon, for instance, they write on the leaves of the talipot. And the Bramin manuscripts in the Telinga language, sent to Oxford from Fort St. George, are written on leaves of the ampana or palma malabarica. Hermanus gives an account of a monstrous palm-tree, called *codda pana*, or *palma montana malabarica*, which, about the 35th year of its age, rises to be sixty or seventy feet high, with plicated leaves nearly round, twenty feet broad; with which they commonly cover their houses, and on which they also write; part of one leaf sufficing to make a moderate book. They write between the folds, making the characters the outer enticle. In the Maldore islands, the natives are said to write on the leaves of a tree called *macaraquean*, which are a fathom and a half long, and about a foot broad. But the most remarkable is the *xagua*, which has something on it extraordinary; its leaves are so large, and of so close a texture, that they cover a man from top to toe, and shelter him from the rain, and other inclemencies of the weather, like a cloak; and from the innermost substance of these leaves, a paper is taken; being a white and fine membrane like the skin of an egg, as large as a skin of our vellum or parchment, and nothing inferior for beauty and goodness to the best of our papers. Paper is chiefly made among us of linen or hempen rags, beaten to a pulp in water, and moulded into square sheets, of the thickness required. But it may also be made of nettles, hay, turnips, parsnips, colewort leaves, or any thing that is fibrous. The Chinese paper is so fine, that many of the Europeans have thought it was made of silk; not considering, says Du Halde, that silk cannot be beat into such a paste as is necessary to make paper; but it is to be observed, that the same author afterwards speaks of a paper, or parchment, made of the balls of silk worms; and the like we are assured by others is done at Cathay. The incalculable advantages which the moderns have derived from the art of printing would have been only imperfectly known, but for the invention of linen rag paper. A more plentiful and economical substance could not be conceived than the tattered remnants of our linen worn out, and otherwise incapable of being applied to the least use, and of which the quantity every day increases; nor could a more ready operation be imagined, than a few hours' titulation in a mill. It has been observed by a French writer, that the despatch of the processes of paper-making is so great, that five workmen in a mill may furnish sufficient paper for the labour of 3000 transcribers.

The operation of making paper (among us) admits of three divisions, viz. the preparing of the rags, the forming of the sheets, and the finishing of the paper. The succession of the several processes is as follows: 1. The rags are washed, or dusted, if they are dirty; then sorted into many qualities, proper for different purposes. 2. The rags are bleached, to render them white; but this operation is sometimes deferred to the next stage of the process. 3. The washing engine of the paper mill is employed to grind the rags in water till they are reduced to a coarse or imperfect pulp, called *half stuff*, or *first stuff*, in which state the bleaching is performed; or at other times it is bleached in the washing engine during the grinding. 4. The *half stuff* is again ground in the beating engine, and water added in sufficient quantity to make a fine pulp, which being conveyed to the vat, the preparation of the rags is completed, and the pulp or stuff is ready for making the sheets. 5. This is done by a workman who takes up a quantity of pulp upon a mould of fine wire cloth, through which the water drains away, and the pulp coagulates into a sheet of paper. 6. Another workman takes the sheet of paper off from the wire mould, and receives it upon a felt; he then covers it over with a second felt, evenly spread out; and continues this operation, which is called *couching*, till he has made a pile of sheets called a *post*, containing six quires. 7. The post of paper, with the felts, is placed in the *vat-press*, and the whole is subjected to a strong pressure, to press out the superfluous water, and give the paper a solidity and firmness it would not otherwise have. 8. The pile of paper is removed from the vat-press, the felts taken out from between the sheets, and they are pressed again by themselves, for a certain time, in a screw-press. 9. The sheets are taken from the press, and hung up, five or six together, on lines in the drying loft, till dry. The paper is now made, and only requires to be finished; but it should be observed, that the greater number of the processes of finishing are only performed upon fine writing paper, common printing paper being ready for packing up when dried. 10. The paper, in five or six sheets together, is dipped into a tub of fine size, and afterwards pressed to force out the superfluity; it is then dried again in the drying loft: but in printing papers this process is rendered unnecessary, by sizing the stuff whilst in the engine, and adding certain ingredients. 11. An examination of each individual sheet of paper is made, all knots and burs are removed, and the bad sheets are taken out. 12. A very large pile of paper is made, and pressed with immense force, to render the sheets flat and smooth. 13. The pile is taken down sheet by sheet, and another made without turning the sheets over; by this means new surfaces of the sheets are brought in contact with each other, and the pile being again subjected to the press, the surface of the paper is improved. This operation is called *parting*, and is repeated two or three times for the best papers. The paper is now counted into quires, folded, and packed up into reams for market. Thus the most filthy article is made the most beautiful and delicate, and many a lady would faint at the sight of that which by art is made to bear her fair hand, either to trace the beauties of nature, or convey her tender sentiments. A sheet of paper may now be made to any length. But the modern process of bleaching is very detrimental to the arts; for some of the finest books now published will, in the course of thirty or forty years, perish, on account of the saccharine particles or substance of the paper being destroyed by this system.—*Lond. Mirror.*

MYTHOLOGY.

THE NYMPHS.

The nymphs are divided into three classes: the celestial, the terrestrial, and the marine. In addition to this, each individual nymph has her own name.

"The celestial nymphs were those genii, those souls and intellects, who guided the spheres of the heavens, and dispensed the influences of the stars to the things of the earth.

"Of the terrestrial nymphs, some presided over the woods, and were called Dryades, from a Greek word which principally signifies an oak, but generally any tree whatever. These Dryades had their habitations in the oaks. Other nymphs were called Hamadryades, for they were born when the oak was first planted, and when it perishes they die also. The ancients held strange opinions concerning oaks: they imagined that even the smallest oak was sent from heaven. The Druidæ, priests of the Gauls, esteemed nothing more divine and sacred than the excrescence which sticks to oaks. Others of those nymphs were called Oreades or Orestiades, because they presided over the mountains; and Napææ, because they had dominion over the groves and valleys. Others, Limoniades, because they looked after the meadows and fields. And others, Meliæ, from the ash, a tree sacred to them; and these were supposed to be the mothers of those children who were accidentally born under a tree, or exposed there.

"Of the marine nymphs, those which presided over the seas were called Nereides or Nerinæ, from the sea god Nereus, and the sea nymph Doris, their parents; which Nereus and Doris were born of Tethys and Oceanus, from whom they were called Oceanitides and Oceaniæ. Others of those nymphs preside over fountains, and were called Naides or Naiades: others inhabit the rivers, and were called Fluviales or Potamides: and others preside over the lakes and ponds, and were called Limnades.

"All the gods had nymphs attending them. Jupiter speaks of his in Ovid:

> Half gods and rustic Fauns attend my will,
> Nymyhs, Satyrs, Sylvans, that on mountains dwell.

"Neptune had many nymphs, insomuch that Hesiod and Pindar call him Nymphagetes, that is, the captain of the nymphs: the poets generally gave him fifty. Phœbus likewise had nymphs called Aganippidæ and Musæ. Innumerable were the nymphs of Bacchus, who were called by different names, Bacchæ, Bassarides, Eloides, and Thyades. Hunting nymphs attended upon Diana, sea nymphs, called Nereides, waited upon Tethys; and fourteen very beautiful nymphs belonged to Juno:

> Twice seven the charming daughters of the main,
> Around my person wait, and bear my train.

Out of all which I will only give you the history of two

"Arethusa was one of Diana's nymphs: her virtue was as great as her beauty. The pleasantness of the place invited her to cool herself in the waters of a fine clear river: Alpheus, the god of the river, assumed the shape of a man, and arose out of the water: he first saluted her with kind words, and then approached near to her: but away she flies, and he follows her; and when he had almost overtaken her, she was dissolved with fear into a fountain, with the assistance of Diana, whom she implored. Alpheus then resumed his former shape of water, and endeavored to mix his stream with hers, but in vain; for to this day Arethusa continues her flight, and by her passage through a cavity of the earth, she goes under ground into Sicily. Alpheus also follows by the like subterraneous passage, till at last he unites and marries his own streams to those of Arethusa in that island.

"Echo was formerly a nymph, though nothing of her but her voice remains now, and even when she was alive, she was so far deprived of her speech, that she could only repeat the last words of those sentences which she heard.

> She was a nymph, though only now a sound;
> Yet of her tongue no other use was found,
> Than now she has; which never could be more
> Than to repeat what she had heard before.

"Juno inflicted this punishment on her for her talkativeness: for when, prompted by her jealousy, she came down to discover Jupiter among the nymphs, Echo detained her very long with her discourses, that the nymphs might have an opportunity to escape, and hide themselves.

> This change impatient Juno's anger wrought,
> Who, when her Jove she o'er the mountains sought,
> Was oft by Echo's tedious tales misled,
> Till the shy nymphs to caves and grotto's fled.

"This Echo by chance met Narcissus rambling in the woods; and she so admired his beauty that she fell in love with him: she discovered her love to him, courted him, followed and embraced him, but he broke from her embraces, and hastily fled from her sight: upon which the despised nymph hid herself in the woods, and pined away with grief, so that every part of her but her voice was consumed, and her bones were turned into stones.

> Her flesh consumes and moulders with despair,
> And all her body's juice is turn'd to air;
> So wondrous are the effects of restless pain,
> That nothing but her voice and bones remain;
> Nay, ev'n the very bones at last are gone,
> And metamorphosed to a thoughtless stone,
> Yet still the voice does in the woods survive;
> The form's departed, but the sound's alive.

"Narcissus met with as bad a fate; for though he would neither love others, nor admit of their love, yet he fell so deeply in love with his own beauty, that the love of himself proved his ruin. His thirst led him to a fountain, whose waters were clear and bright as silver.

> There was by chance a living fountain near,
> Whose unpolluted channel ran so clear,
> That it seemed liquid silver.

"When he stooped to drink, he saw his own image; he staid gazing at it, insomuch that he fell passionately in love with it. A little water only separated him from his beloved object.

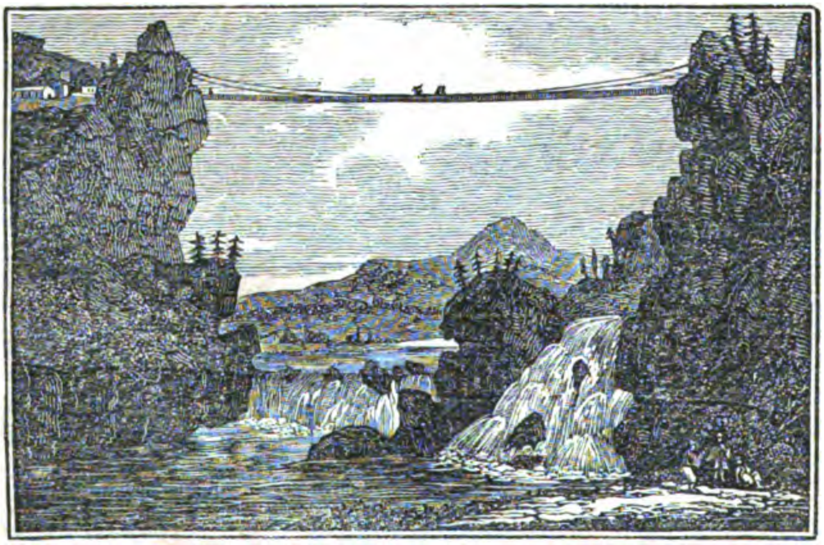
> A little drop of water does remove
> And keep him from the object of his love.

"He continued a long time admiring this beloved picture, before he discovered what it was he so passionately adored; but at length the happy creature perceived, that the torture he suffered was from the love of his own self.

"In a word, his passion conquered him, and the power of love was greater than he could resist, so that by degrees he wasted away and consumed, and at last, by the favour of the gods, was turned into a daffodil, a flower called by his own name."

THE INFERIOR RURAL DEITIES.

"Rusina, the goddess to whose care all parts of the country are committed. Collina, she who reigns over the hills. Vallonia, who holds her empire in the vallies. Hippona, who presides over the horses and stables. Bubona, who hath the care of the oxen. Seia, who takes care of the seed while it lies buried in the earth. She is likewise called Segetia, because she takes care of the blade as soon as it appears green above the ground. Runcina is the goddess of weeding. She is invoked when the fields are to be weeded. Occator, is the god of harrowing. He is worshipped when the fields are to be harrowed. Sator and Sarritor are the gods of sowing and raking. To the god Robigus were celebrated festivals called Robigalia, which were usually observed upon the seventh of the calends of May, to avert the blasting of the corn. Stercutius, Stercutus, or Sterculius, called likewise Sterquilinius and Picumnus, is the god who first invented the art of manuring the ground. Proserpine is the goddess who presides over the corn, when it is sprouted pretty high above the earth. We shall speak more of her when we discourse concerning the infernal deities. Nodosus, or Nodotus, is the god that takes care of the knots and the joints of the stalks. Volusia is the goddess who takes care to fold the blade round the corn, before the beard breaks out, which foldings of the blade contain the beard, as pods do the seed. Patelina, who takes care of the corn after it is broken out of the pod, and appears. The goddess Flora presides over the ear when it blossoms. Lactura, or Lactucina, who is next to Flora, presides over the ear when it begins to have milk. And Matura takes care that the ear comes to a just maturity. Hostilina was worshipped that the ears of corn might grow even, and produce a crop proportionably to the seed sown. Tutelina, or Tutulina, hath a tutelage of corn when it is reaped. Pilumnus invented the art of kneading and baking bread. Mellona is the goddess who invented the art of making honey. And Fornax is esteemed a goddess, because, before the invention of grinding the wheat, corn was parched in a furnace."



THE CHAIN BRIDGE IN CHINA.

Whether the Chinese are right in assigning to their portion of the world a much greater antiquity than we are willing to allow, may be fairly questioned; but certain it is, that in China many arts and sciences have been known at a period when the European nations were sunk in barbarity and ignorance. As one of the many proofs which might be adduced in support of this remark, we may mention that the Chinese were the first to construct chain or suspension bridges, which have only within the last few years been introduced into this country from the United States of America.

Of this bridge, which is certainly the oldest of the kind at present known to exist, we this week present our readers with an engraving, and a more romantic scene it is difficult to conceive. This famous bridge is on the road to Yun Nan, in the province of Koei-Tcheou. It is thrown over a rapid torrent between two lofty mountains, and was constructed by a Chinese General, in the year 65 of the Christian era. At each end of the rocky mountain, a gate has been erected between two stone pillars, six or seven feet high, by seventeen or eighteen feet wide. Between these pillars four chains are suspended by large rings, and united transversely by smaller chains. Over these chains is a flooring of planks of timber which are renewed as often as they become decayed. Other chain bridges have been constructed in China, in imitation of this: but none of them are either so large or have been so durable. To the very limited intercourse the Europeans are allowed in the interior of China, is to be attributed the circumstance that an invention which promises to be of such general utility as chain bridges, was not introduced into this country until upwards of eighteen centuries after it was known in China.

NATURAL HISTORY.

THE CAMELOPARD.

"This animal is one of the tallest, most beautiful, and most harmless animals in nature. The enormous disproportion of its legs (the fore legs being as long again as the hinder ones*) is a great obstacle to the use of its strength; its motion is waddling and stiff; it can neither fly from its enemies in its free state, nor serve its master in a domestic one. The species is not very numerous, and has always been confined to the deserts of Ethiopia, and some other provinces of Africa and India. As these countries were unknown to the Greeks, Aristotle makes no mention of this animal; but Pliny speaks of it, and Oppian describes it in a manner that is far from equivocal. 'The Camelopard,' says this author, 'has some resemblance to the camel: its head and ears are small, its feet broad, and its legs long; but the height of the last is very unequal, the fore legs being much longer than the hinder, which are very short; so that, when the animal appears standing and at rest, it has somewhat the appearance of a dog sitting. There are two prominences upon the head, just between the ears: they resemble two small and straight horns. Its mouth is like the stag's; its teeth small and white; its eyes full of fire; its tail short, and furnished with black hair at its end.'

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* This is erroneous, as will be seen from Le Vaillant's description, which we have added to this article.

"'There is,' says Strabo, 'a large beast in Ethiopia called *Camelopardalis;* although it bears no resemblance to the panther, for its skin is not spotted in the same manner: the spots of the panther are orbicular, and those of this animal are long, and nearly resembling those of the fawn or young stag.' Gillius's description seems still better. 'I have seen,' says he, 'three Camelopards at Cairo. On their heads are two horns, six inches long; and, in the middle of their forehead, a tubercle rises to about the height of two inches, which appears like a third horn. This animal is sixteen feet high when he holds his head erect. Its neck alone is seven feet; and it is twenty feet long from the tip of the nose to the end of the tail. Its fore and hind legs are nearly of an equal height; but the thighs before are so long in comparison to those behind, that its back seems to slope like the roof of a house. Its whole body is sprinkled with large brown spots, which are nearly of the same form. Its feet are cloven like those of the ox.'

"In inspecting accounts travellers have given of the Camelopard, I find a tolerable agreement between them. They all agree, that it can reach with its head to the height of sixteen or seventeen feet, when standing erect; and that the fore legs are as high again as the hinder ones; so that it seems as if it were seated upon its crupper. They all likewise agree, that it cannot run very swift on account of this disproportion; that it is very gentle, and that by this quality, and even by the shape of the body, it partakes more of the shape and nature of the camel than of any other animal; that it is among the number of ruminating animals, and, like them, is deficient of the incisive teeth in its upper jaw. By the testimonies of some, we find that the Camelopard is to be met with in the southern parts of Africa, as well as in those of Asia.

"It is very clear, from what we have mentioned, that the Camelopard is a very different species from every other animal; but if we referred it to any, it would be the camel rather than the stag.

"We are ignorant of the substance of the horns of the Camelopard; and in that part it may resemble the stag more than the ox, though possibly they may be neither solid, like those of the first, nor hollow, like those of the ox, goat, &c. Who knows but they may be composed of united hairs, or of a substance and texture entirely peculiar to themselves? The horns of the Camelopard are surrounded with large coarse hair, and not covered with a down or velvet, like those of the stag. The tubercle in the middle of the head seems to form a third horn: the two others, which are not pointed, but have mossy nobs at their ends, are perhaps only tubercles somewhat resembling the former. Travellers inform us, that the female Camelopards have horns like the males, with this difference only, that they are smaller. If this animal, therefore, was really of the stag kind, the analogy would be violated here likewise; for, of all such animals, there is only the female rein-deer that has horns.

"Since the period when Buffon wrote, the Giraffe has become much better known. Several have been brought to Europe. One of them was sent as a present to his Majesty by the Pacha of Egypt, and arrived in this country in 1827. It died recently. There is still one existing in the Jardin des Plantes, at Paris. M. le Vaillant, the first naturalist who had an opportunity of closely examining the Giraffe, gives a full and accurate description of it in his Travels. 'The Giraffe chews the cud, as all horned animals with cloven feet do. Like them, too, it crops the grass; though seldom, because pasture is scarce in the country which it inhabits. Its ordinary food is the leaf of a sort of mimosa, called by the natives *kancap,* and by the planters *kamel doorn.* The tree being peculiar to the canton, and growing only there, this may be the reason why it takes up its abode in it, and why it is not seen in those regions of the south of Africa where the tree does not grow. This, however, is but a vague conjecture, and which the reports of the ancients seem to contradict.'

"Its head is unquestionably the most beautiful part of its body. Its mouth is small; its eyes large and animated. Between the eyes, and above the nose, it has a very distinct and prominent tubercle. This is not a fleshy excrescence, but an enlargement of the bony part, the same as the two little bosses, or protuberances, with which its occiput is armed, and which rise as large as a hen's egg, one on each side of the mane, at its commencement. Its tongue is rough, and terminates in a point. Each jaw has six grinders on each side, but the lower jaw only has eight cutting teeth in front, while the upper jaw has none.

"The hoof is cloven, has no heel, and much resembles that of the ox. It may be observed, however, at the first sight, that the hoof of the fore foot is larger than that of the hind foot. The leg is very slender; but the knee is swelled like that of the stumbling horse, because the animal kneels down to sleep. It has also a large callosity in the middle of the sternum, owing to its usually reposing on it.

"If I had never killed a Giraffe, I should have thought, with many other naturalists, that its hind legs were much shorter than the fore ones. This is a mistake: they bear the same proportion to each other as is usual in quadrupeds. I say the same proportion as is usual, because in this respect there are variations, even in animals of the same species. Every one knows, for instance, that mares are lower before than stallions. What deceives us in the Giraffe, and occasions the apparent difference between the legs, is the height of the withers, which may exceed that of the crupper from sixteen to twenty inches, according to the age of the animal; and which, when it is seen at a distance in motion, gives the appearance of much greater length to the fore legs.

"If the Giraffe stand still, and you view it in the front, the effect is very different. As the fore part of its body is much larger than the hind part, it completely conceals the latter; so that the animal resembles the standing trunk of a deep tree.

"Its gait, when it walks, is neither awkward nor unpleasing; but it is ridiculous enough when it trots; for you would then take it for a limping beast, seeing its head, perched at the extremity of a long neck which never bends, swaying backwards and forwards, the neck and head playing in one piece between the shoulders as on an axis. However, as the length of the neck exceeds that of the legs at least four inches, it is evident that the length of the head, too, taken into the account, it can feed without difficulty, and of course is not obliged either to kneel down or to straddle with its feet, as some authors have asserted.*

"Its mode of defence, like that of the horse and other solidungulous animals, consists in kicking with the heels. But its hind parts are so light, and its jerks so rapid, that the eye cannot follow them. They are even sufficient to defend it against the lion, though they are unable to protect it from the impetuous attack of the tiger.

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* It is, besides, unnecessary for the animal to kneel, as it feeds principally on the boughs of a species of acacia, which it draws down to its mouth with its long and flexible tongue.

"Its horns are never employed in fight. I did not perceive it used them against my dogs; and these weak and useless weapons would seem but an error of Nature, if Nature could ever commit error, or fail in her designs.

"In their youth, the male and female Giraffes resemble each other in their exterior. A knot of long hair then terminates their obtuse horns; this peculiarity the female preserves for some time, but at the age of three years the male loses it. At first, the hide is of a light red, but it deepens in colour as the animal advances in age, and at length it is of a yellow brown in the female, and of a brown bordering on black in the male. The male may, even at a distance, be distinguished from the female by this difference of colour. As to the arrangement and form of the spots, the skin varies in both sexes. The female does not stand so high as the male, and the frontal prominence is less marked. She has four teats; and, according to the account given by the natives, she has one young one at a birth, with which she goes twelve months."

ON BLESSING PERSONS WHEN THEY SNEEZE.

This custom is derived from very ancient times, and its origin has been variously accounted for. Several writers affirm that it commenced in the year 750, under Pope Gregory the Great, when a pestilence occurred, in which those who sneezed died; whence this Pontiff appointed a form of prayer, and a wish to be said to persons sneezing, for averting this fatality from them. But the custom is of much more ancient date. It was accounted very ancient in the time of Aristotle, who, in his Problems, has endeavoured to account for it. It is alluded to in the Greek Anthology in an epigram, in which the salutation of *salve Jupiter* is given as a familiar phrase addressed to sneezers. Alexander Ross says, "Prometheus was the first that wished well to the sneezer, when the man which he had made of clay, fell into a fit of sternutation, upon the approach of that celestial fire which he stole from the sun. This gave origin to that custom among the Gentiles in saluting the sneezer. They used also to worship the head in sternutation, as being a divine part, and seat of the senses and cogitation." Various testimonies show the antiquity of this custom, and Aristotle has a problem "why sneezing from noon to midnight was good, but from night to noon unlucky." If he lived in these times, I query whether he would not be *pulled up* to Union Hall to answer for his necromancy.

The Rev. John James Blunt (in his "Vestiges of Ancient Manners and Customs, discoverable in Modern Italy and Sicily,") says, "Whatever may have been the cause, something mysterious seems always to have been attached to the act of sneezing. Any future evil, however, to which it might have been the prelude, was supposed to be averted by a word of good augury from a bystander. This, like many other unintelligible notions, has descended from the Romans (at least, more immediately from them, though the same fancy prevailed amongst the Jews and Greeks,) to several modern nations. In our own, the salutation of "God bless you" is sometimes given upon such occasions; in France, "*Dieu vous soit en aide*," is not uncommon; but in Italy, that of "*Viva*," or "*Felicita*," is paid with the utmost scrupulousness. Thus too it is recorded of Tiberius, that whenever he sneezed in his carriage, he exacted such a mark of attention from his companions with the most religious solicitude." And Brown, in his "Vulgar Errors," says, "We read in Godignus, that upon a *sneeze* of the Emperor Monomopata, there passed acclamations successively through the city." —*London Mirror.*

WORSHIPPING THE DEVIL.

Whatever may be men's subserviency to his sable Majesty, few are willing to confess it. But it seems by the following extract from the Liberian (Africa) correspondent of the Commercial Advertiser, that religious homage is statedly paid to him by a whole nation: The writer says—"Doubtless you are aware, that the natives have stated times to assemble in what they call the "*Devil's Bush*," to carry their offerings and pay homage to the Devil; or as they assert, to appease his anger, and make him their friend. They have a select man, whose office it is to find the Devil. He carries a bowl of Palaver Sauce, (a great dish among them, prepared with rice and palm oil, and a certain leaf, with which it is seasoned,) every evening. On the morning the bowl is found to be empty, and the people are made to believe the Devil has eaten the food."

FROM OSSIAN.

A Tale of the times of old! the deeds of days of other years!

The murmur of thy streams, O Lora! brings back the memory of the past. The sound of thy woods, Garmallar, is lovely in mine ear. Dost thou not behold, Malvina, a rock, with its head of heath? Three aged pines bend from its face; green is the narrow plain at its feet; there the flower of the mountain grows, and shakes its white head in the breeze. The thistle is there alone, shedding its aged beard. Two stones, half sunk in the ground, shew their heads of moss. The deer of the mountain avoids the place, for he beholds a dim ghost standing there.[*] The mighty lie, O Malvina! in the narrow plain of the rock.

A tale of the times of old! the deeds of days of other years!

Who comes from the land of strangers, with his thousands around him? the sun-beam pours its bright stream before him; his hair meets the winds of his hills. His face is settled from war. He is calm as the evening beam that looks from the cloud of the west, on Cona's silent vale. Who is it but Comhal's son,[*] the king of mighty deeds! he beholds his hills with joy, he bids a thousand voices rise. "Ye have fled over your fields, ye sons of the distant land! The king of the world sits in his hall, and hears of his people's flight. He lifts his red eye of pride; he takes his father's sword. Ye have fled over your fields, sons of the distant land!"

Such were the words of the bards when they came to Selma's halls. A thousand lights[†] from the stranger's land rose in the midst of the people. The feast is spread around: the night passed away in joy. Where is the noble Clessammor![‡] said the fair-haired Fingal. Where is the brother of Morna, in the hour of my joy? Sullen and dark he passes his days in the vale of echoing Lora; but behold, he comes from the hill, like a steed in his strength, who finds his companions in the breeze, and tosses his bright mane in the wind. Blest be the soul of Clessammor, why so long from Selma!

ORIENTAL LOVE-LETTER.

The following letter was sent by the Persian ambassador Abba Mirza, to an English lady, who had made a deep impression on his Excellency's heart.

"When your glances dart like arrows from the bow of your eyebrow, millions of hearts are wounded. You now direct your shafts against a languishing soul; but though aimed at it for the first time, their aim could not be missed. When sharing with you the intoxicating cup of love, if an angel descended from Heaven were to appear at the gate of my palace, I would not open it. In vain the most fatal examples warn us not to enter the bazaar of love; I heed them not, and constantly expose myself to new dangers. I have thrown open the magazine of my soul; alas! I tremble lest the purchaser should enter at my cost. My heart, sick with love for you, drinks with rapture the poisoned cup of death; but such are the transports I experience, that thousands must envy my lot. The dust of the threshold of your door is a precious ointment to my eye—why am I not permitted to enjoy it? A thousand afflictions weigh on the heart of the Ambassador; when separated from you, perhaps these lines may recal him to your memory."

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[*] Fingal returns here, from an expedition against the Romans, which was celebrated by Ossian in a poem called the strife of Crona.

[†] Probably wax-lights; which are often mentioned as carried, among other booty, from the Roman province.

[‡] Clessamh-mor, mighty deeds.

INDIAN SERENADE.

Awake! flower of the forest; beautiful bird of the Prairie.

Awake! awake! thou with the eyes of the fawn.

When you look at me I am happy, like the flowers when they feel the dew.

The breath of thy mouth is as sweet as the fragrance of flowers in the morning—sweet as their fragrance at evening in the moon of the fading leaf.

Does not the blood of my veins spring towards thee like the bubbling springs to the sun in the moon of the bright nights?—(April.)

My heart sings to thee when thou art near, like the dancing branches to the wind in the moon of strawberries.—(June.)

When thou art not pleased, my beloved, my heart is darkened like the shining river, when shadows fall from the clouds above.

Thy smiles cause my troubled heart to be brightened, as the sun makes to look like gold the ripples which the cold wind has created.

Myself! behold me! blood of my bleeding heart.

The earth smiles—the waters smile—the heavens smile; but I—I lose the way of smiling when thou art not near—awake! awake! my beloved.

ITEMS OF INTELLIGENCE.

Father Peters, the Jesuit, calculated that in 208 years, four men might have 258,719,000,000 of descendants. Enough to people many such worlds as ours. Sir W. Blackstone shows, that in twenty generations, every man actually has 1,048,576 ancestors.

One of the greatest curses of a despotic government is a standing army. An army of mercenaries strikes terror to the hearts of the people. We may gather a good idea of European freedom from the number of their military power.

Russia has an army of	500,000
Austria	460,000
Prussia	350,000
German Confederation	210,000
	1,520,000

The city of Pasta, in South America, containing a population of 12 or 15,000 inhabitants, was destroyed by an earthquake on the 22d of January, by which 50 lives were lost.

The city of Popayan, containing 30,000 inhabitants, has also been destroyed. The entire country, for leagues around Pasta, has been converted into a scene of complete desolation and mourning.

A worm was lately taken away from a young man in Roxbury, by Dr. Stewart, which was over 30 feet in length! Its appearance was perfectly white, with joints beginning almost imperceptibly at the head, increasing in size and length to its extremity—the longest being something more than an inch. The head run to a point as fine as that of a lancet.—Its body was flat, and about half an inch at the widest part. The young man, who is about 26 years of age, says he feels confident this creature has been with him from infancy, and so great was the torture occasioned by it, that he thought death could only relieve him. Dr. S. invites the curious to call and see it, at his house. He has it preserved in spirits. It is really a curious case.—*Boston Centinel.*

One third of the inhabitants of Connecticut, over 16 years of age, have pledged themselves to total abstinence from ardent spirits.

POETRY.

INSCRIPTION FOR THE ENTRANCE INTO A WOOD.

Bryant.

Stranger, if thou hast learnt a truth which needs
Experience more than reason, that the world
Is full of guilt and misery, and hast known
Enough of all its sorrows, crimes, and cares
To tire thee of it,—enter this wild wood,
And view the haunts of Nature. The calm shade
Shall bring a kindred calm, and the sweet breeze,
That makes the green leaves dance, shall waft a balm
To thy sick heart. Thou wilt find nothing here
Of all that pained the haunts of men,
And made thee loathe thy life. The primal curse
Fell, it is true, upon the unsinning earth,
But not in vengeance. Misery is wed
To guilt. And hence these shades are still the abodes
Of undissembled gladness: the thick roof
Of green and stirring branches is alive
And musical with birds, that sing and sport
In wantonness of spirit; while, below,
The squirrel, with raised paws and form erect,
Chirps merrily. Throngs of insects in the glade
Try their thin wings, and dance in the warm beam
That waked them into life. Even the green trees
Partake the deep contentment: as they bend
To the soft winds, the sun from the blue sky
Looks in, and sheds a blessing on the scene.
Scarce less the cleft-born wild-flower seems t' enjoy
Existence, than the winged plunderer
That sucks its sweets. The massy rocks themselves,
The old and ponderous trunks of prostrate trees,
That lead from knoll to knoll, a causey rude,
Or bridge the sunken brook, and their dark roots,
With all their earth upon them, twisting high,
Breathe fixed tranquillity. The rivulet
Sends forth glad sounds, and, tripping o'er its bed
Of pebbly sands, or leaping down the rocks,
Seems with continuous laughter to rejoice
In its own being. Softly tread the marge,
Lest from her midway perch thou scare the wren
That dips her bill in water. The cool wind,
That stirs the stream in play, shall come to thee,
Like one that loves thee, nor will let thee pass
Ungreeted, and shall give its light embrace.

GEM.

A precious stone; or a sort of siliceous earth, consisting of silica and alumina, with a small portion of lime and oxide of iron. The gem is remarkable for its hardness and internal lustre. Under this name is comprehended the diamond, ruby, sapphire, hyacinth, beryl, garnet, chrysolite, &c. To these have been added rock crystals, the finer flints of pebbles, the cat's eye, the occulus mundi, the chalcedony, the moon stones, the onyx, the cornelian, the sardonyx, agate, &c.

The imitation of antique gems, by taking the impressions and figures upon them, in glass of the colour of the original gem, or on sealing wax or brimstone, has been practised at different times by persons who, in respect to the first method of taking them on glass, have kept the art to themselves, and suffered it to die with them. But the process adopted by Mr. Homberg, which has also been communicated by him to the world, is highly esteemed for the perfection to which he has brought the art. From the engraved gems of the king's cabinet, he took such exact resemblances of the originals as sometimes to deceive the nicest judges, who mistook them for the true antique stones. His method consists in taking the impression of the gem in a very fine earth, and then conveying the impression from the earth to a piece of half-melted glass.

GLUCINE.

An earth of a sweetish taste, which has been lately discovered by Vauquelin in analyzing the beryl. It is infusible in fire, and insoluble in water, but combines with acids, making with them soluble salts.

SECTION IX.

HISTORY.

DISTINGUISHED HISTORICAL CHARACTERS DURING THE FOURTH PERIOD.

Yu-ta was the founder of the Chinese *Monarchy*. His surname *Ta* signifies the Great. He was distinguished for literature and science, as well as for political management, being an adept in agriculture, astronomy, and other subjects of a kindred character. Agriculture in particular was greatly indebted to him for an excellent treatise which he wrote upon that subject at this early period: though, when we speak of *writing* among the ancient Chinese, we should bear in mind that the characters by them used were pictures of various things, and not letters, nor even the present Chinese characters. This illustrious monarch reigned 17 years, and died much lamented by his people.

Belus was the successor of Nimrod, the first monarch of Babylon. He, like his predecessor, was selected by the people, on account of his eminent talents, to be their sovereign. He was a scholar as well as a statesman, and sought the intellectual improvement of the people whom he was chosen to govern. He is said by Pliny to have been the inventor of the Chaldean astronomy. He reigned 60 years, and died A. M. 1966. After his death, a statue was erected to his honour. To this statue the same respect was paid by the people as they had been accustomed to pay to Belus when alive. It was likewise a refuge for the criminal, who might flee thither from the pursuit of the avenger. At length the veneration of this statue rose to such a degree, that it became absolute adoration; and Belus was thenceforward regarded as more than man, and was deified under the name of Jupiter according to some, and Saturn of Babylon according to others. This is the Bel, Baal, &c. of scripture. A most magnificent temple was erected to his honour in Babylon, the remains of which are still supposed to be visible. The Chaldeans and Babylonians held, that Belus destroyed the first inhabitants of the earth, who were monsters produced by chaos; that he completed the sun, moon, and planets, which before were in an unfinished state; and that he created man from the dust of the earth, infusing into him divine reason. Berosus says, that Belus cut in sunder a woman, and formed the earth out of the one half of her, and the heavens out of the other. He also divided the darkness, and separated the heavens from the earth, and reduced the universe to order. But the animals not being able to bear the prevalence of light, died. Belus upon this, seeing a vast space unoccupied, though by nature fruitful, commanded one of the gods to take off his head, and to mix the blood with the earth, and from thence to form other men and animals, which should be capable of bearing the air. Belus formed also the stars, and the sun, and the moon, and the five planets.

Ninus was the successor of Asshur, the founder of the Assyrian empire. Some make him the son of Belus; but this we conceive to be a mistake. Belus was *king* of Babylon, and Ninus was its *conqueror:* how then could the one have been the son of the other? Ninus was an ambitious character, and waged the first wars of which we have any account. His first attempt was against Babylonia, his father land; which attempt proved successful. Encouraged by this success, he undertook fresh enterprises, and overran many small states, till at length he reached Bactria, where he met with the most determined opposition; but through the skill of Semiramis, the wife of one of his officers, he succeeded in the capture of its chief city. After this he made Semiramis his queen, by whom he had a son named Ninyas. Ninus reigned 52 years, and is computed to have died A. M. 2017.

Semiramis, the queen and successor of Ninus, was one of the most distinguished characters that have ever figured in any age; and to this day her name is but another for female energy, skill, and intrepidity. To say of a queen, She is the Semiramis of the age, would be regarded as the highest possible compliment to her genius and statesmanship. This celebrated female sovereign rose by the strength of her own native intellect from the humble station of wife of a captain in Ninus's army, to that of queen of the greatest monarchy of the age in which she lived. The cause of her elevation, as we have already seen, was the skill which she evinced in her plan for the capture of the Bactrian capital. After the death of her husband, she became the reigning queen of his dominions, and removed the seat of government from Nineveh to Babylon. The latter place she embellished beyond all former precedent, and rendered it the wonder of the world. Having accomplished this, she raised a mighty army, and commenced a new military career. After subduing a portion of Ethiopia, she undertook an expedition to India, to complete the conquest commenced by her husband in that quarter. "She advanced towards the river Indus, and having prepared boats, attempted to pass it with her army. The passage was for a long time disputed, but after a bloody battle, she put her enemies to flight. Upon this she advanced directly into the country. As soon as the Indian king thought her sufficiently advanced, he gave her battle, and routed her in his turn. Semiramis, twice wounded, was obliged to return to her country, with scarcely one third of her army. Sometime after, discovering that her son was plotting against her, she abdicated her throne, put the government into his hands, and withdrew from public life. She lived 62 years, of which she reigned 42." She died an example of unhallowed ambition and perverted talent—a warning to the ambitious of all succeeding ages.

Ninyas, her son and successor, was a peaceful prince, seeking rather the welfare than the false glory of his people. On account of this his pacific disposition, he has been stigmatized by some historians as effeminate and imbecile. But it is time that things were called by their right names in history, as well as in every other case. It is time that conquerors were viewed in their true light—viewed as wholesale robbers and murderers—while those rulers who cultivate the arts of peace, and forego their own aggrandizement for the welfare of their people, should be revered as the truly great ones of the earth. We trust the time is not far distant, when those mighty chieftains who have deluged the world with tears and blood will be remembered only with abhorrence; and, on the other hand, when the memory of those who have pursued a different course will be embalmed in the affections of the human race.

Pathrusim, a son of Mizraim, was one of the most famous characters of this period. He was king of Thebais in Egypt. The Egyptians called him Thyoth or Thoth; the Greeks, Hermes; and the Latins, Mercurius. He was beyond doubt the inventor of letters. He was likewise distinguished in many other respects, being a celebrated lawgiver, astronomer, and divine.

Terah, the father of Abraham, was one of the conspicuous characters of the period we are now considering. He lived at first at Ur of the Chaldees, but finally emigrated with his family to Haran. He was noted as one of the patriarchal line, and the father of that remarkable man, Abraham. He died at the age of 205 years.

In our first No. of the present Vol. we introduced a cut under our historical head representing the tower of Babel, together with an accompanying, though very brief description of that tower. The following article is a more full description.

REMAINS OF THE TOWER OF BABEL.

The most remarkable ruin, both in magnitude and name, is that called by the Arabs birs Nimrod, or Nimrod's tower. This, there is every reason to believe, was the ancient tower of Babel, the earliest and mightiest specimen of human skill and human audacity. The travels of Mr. Rich and Sir R. K. Porter, have rendered us more familiar with those huge ruins than could previously have been hoped for. The compressed view of their accounts given by Heeren is very striking and animated.

"This huge mass of building lies about six miles southwest of Hillah. It has the appearance of an oblong hill, the base of which, according to Porter is two thousand and eighty-two feet in circumference. Rich reckons it two thousand two hundred and eighty six. It may easily be conceived, that it is scarcely possible to fix in a positive manner the circumference of such a ruin. Its present height, reckoning to the bottom of the tower which crowns its summit, is two hundred feet; the tower itself is thirty-five. Looking at it from the west, the entire mass rises at once from the plain, in one stupendous, though irregular pyramidal hill. It is composed of fine bricks, kiln-baked. From the western side, two of its stories may be distinctly seen; the first is about sixty feet high, cloven in the middle by deep ravines. The tower-like looking ruin on the summit is a solid mass, twenty-eight feet wide, of the most beautiful masonry; to all appearances it formed an angle of some square buildings, the ruins of which are yet to be seen on the eastern side. The cement which connects the bricks is so hard that it was impossible to chip the smallest piece; and for this reason none of the inscriptions can be copied, as they are always on the lower surface of the bricks. It is rent from the top nearly half way to the bottom; and at its foot lay several unshapen masses of fine brick work, still bearing traces of a violent fire; which has given them a vitrified appearance, whence it has been conjectured that it has been struck by lightning. The appearance of the hill on the eastern side evidently shows that this enormous mass has been reduced more than half. Only three stories out of the eight which it formerly contained can now be discerned. The earth about the bottom of the hill is now clear; but is again surrounded with walls, which form an oblong square, enclosing numerous heaps of rubbish, probably once the dwellings of the inferior deities; or of the priests and officers of the temple. The appearance of the tower of Nimrod is sublime even in its ruins. Clouds play around its summit; its recesses are inhabited by lions, three being quietly basking on its heights when Porter approached it; scarcely intimidated by the cries of the Arabs, gradually and slowly descended into the plain. Thus the words of the prophet have been fulfilled. "Wild beasts of the desert shall be there; owls shall fill their houses, ostriches shall dwell there, and satyrs shall dance there. Jackals shall howl in their palaces, and wild hounds in their pleasant places!"—*Presbyterian.*

LITERATURE.

LANGUAGE.

All evidences, as we have seen, tend to show, that Pathrusim, the son of Mizraim, the son of Ham, was the inventor of letters. This invention greatly diminished the labour of writing, and facilitated the circulation of knowledge. Hence the superiority of those nations in this respect, to those who still adhere to hieroglyphics, like the Chinese.

We are not to consider letters in the light of an isolated invention, springing up spontaneously in the mind of their author as by a kind of inspiration. But we are to regard them as the result of the natural progress in improvement which is the characteristic of mankind. The most natural mode of conveying ideas through the medium of the sense of sight, is, by pictures, representing what we wish to describe. This is the mode now practised by the tawny sons of our own American forests, and by all savage tribes who have made no advances towards civilization. It was the mode practised in the first ages of the world. This is denominated pictorial writing. An improvement on this mode would gradually be made, by abridging certain parts of those pictures, still leaving enough, however, to show what they were intended to represent. This abridgment would still go on, till at length the characters under consideration would lose their *resemblance* of the things once signified by them, and would then be understood as signifying those things, not from any resemblance, but from being used *in their stead.* This mode is denominated the symbolical or hieroglyphical kind of writing, and is the present Chinese mode.* But its inconvenience, in consequence of the vast number of symbols which must be made use of in order to convey all necessary ideas, together with the difficulty of expressing in this manner some ideas at all, would tend to induce men to resort to some expedient whereby they could convey ideas with greater facility and convenience.

But what new mode could be devised to accomplish this object?

To every character there was of course attached a sound or name according to the thing represented; and thus symbol and sound became associated. Now, as there are but few simple sounds, insomuch that it would require but few characters to represent them, and as different sounds by coalescing form other sounds, the idea that would most naturally suggest itself to an individual in attempting to improve written language, when it could no longer be improved in the hieroglyphic character, would be, to make an experiment in sound, which is the basis of vocal language, and to cause certain characters to stand for certain *sounds*, instead of certain *things.* It must be obvious at first thought that this would be an immense improvement. But few characters would be necessary; and, to express any particular word, it would only be requisite to combine such of those characters as would represent the sound of the word when uttered. Thus, the same few characters variously combined would represent all words, and convey any idea whatever, instead of taxing the memory with numerous characters. In this way undoubtedly came alphabetical letters.

To show the tendency of written language, whether pictorial or hieroglyphic, to advance towards the alphabetic, it should be remarked that the Mantcheu or Tartars in China have a system of verbal writing. And even the Chinese characters themselves have in certain cases been already used as the representatives of sounds.

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* Illustrations of both the pictorial and heroglyphic modes of writing are given in Vol. I. of this work, pp. 225, 236, and 329.

NATURAL HISTORY.

THE LLAMA.

"It is very singular that, although the Llama and the Paco are domesticated in Peru, Mexico, and Chili, as the horse is in Europe, or the Camel in Arabia, we scarcely know any thing of them. Peru, according to Gregory de Bolivar, is the true and native country of the Llamas; they are conducted into other provinces, as New Spain, &c.; but this is rather for curiosity than utility: but in Peru, from Potosi to Caraccas, these animals are in great numbers, and make the chief riches of the Indians and Spaniards, who rear them. Their flesh is excellent food; their hair, or rather wool, may be spun into beautiful clothing; and they are capable of carrying heavy loads in the most rugged and dangerous ways; the strongest of them will travel with two hundred or two hundred and fifty pounds weight on their backs; their pace is but slow, and their journey is seldom above fifteen miles a day; but then they are sure, and descend precipices, and find footing among the most craggy rocks, where even men can scarcely accompany them; they commonly travel for five days together, when they are obliged to rest, which they do of their own accord, for two or three days. They are chiefly employed in carrying the riches of the mines of Potosi. Bolivar affirms that in his time above three hundred thousand of these animals were in actual employ.

"The growth of the Llama is very quick, and its life is but of short duration. This animal couples as early as at three years of age, and remains strong and vigorous till twelve; after which it begins to decline, and becomes entirely useless at fifteen. Their nature appears modelled on that of the Americans. They are gentle and phlegmatic, and do every thing with the greatest leisure and caution. When they stop on their journeys, they bend their knees very cautiously, in order to lower their bodies without disordering their load. As soon as they hear their driver whistle, they rise up again with the same precaution, and proceed on their journey; they feed as they go along on the grass they meet with in their way, but never eat in the night, making use of that time to ruminate. The Llama sleeps, like the camel, with its feet folded under its belly, and ruminates in that posture. When overloaded or fatigued, it falls on its belly, and will not rise, though its driver strike it with his utmost force.

"The Llama is about four feet high; its body, comprehending the neck and head, is five or six feet long; its neck alone is near three feet. The head is small and well proportioned, the eyes large, the nose somewhat long, the lips thick, the upper divided, and the lower a little depending: it wants the incisive and canine teeth in the upper jaw. The ears are four inches long, and move with great agility. The tail is seldom above eight inches long, small, straight, and a little turned up at the end. It is cloven-footed, like the ox; but the hoof has a kind of spear-like appendage behind, which assists the animal to move and support itself over precipices and rugged ways. The back is clothed with a short wool, as are the crupper and tail; but it is very long on the belly and sides. These animals differ in colour; some are white, others black, but most of them brown.

"These useful and even necessary animals are attended with no expense to their masters; for, as they are cloven-footed, they do not require to be shod, nor do they require to be housed, as their wool supplies them with a warm covering. Satisfied with a small portion of vegetables and grass, they want neither corn nor hay to subsist them; they are still more moderate in what they drink, as their mouths are continually moistened with saliva, which they have in a much greater quantity than any other animal. The natives hunt the *Guanacos*, or wild Llama, for the sake of its fleece. The dogs have much trouble to follow them; and if they do not come up with them before they gain the rocks, both the hunters and dogs are obliged to desist in their pursuit.

"The Pacos are a subordinate kind to the Llamas, much in the same proportion as the ass is to the horse; they are smaller, and not so serviceable; but their fleece is more useful; their wool is fine and long, and is a sort of merchandise, as valuable as silk. The natural colour of the Pacos is that of a dried rose-leaf, which is so fixed that it undergoes no alteration under the hands of the manufacturers. They not only make good gloves and stockings of this wool, but also form it into quilts and carpets, which bring a higher price, and exceeed those of the Levant.

"The Pacos also resemble the Llamas in their form, excepting that their legs are shorter, and their muzzle thicker and closer. They inhabit and climb over the highest parts of the mountains. The snow and ice seem rather agreeable than inconvenient to them. When wild, they keep together in flocks, and run very swift; and, as soon as they percieve a stranger, they take flight, driving their young before them. The ancient monarchs of Peru rigorously prohibited the hunting of them, as they multiply but slowly; but, since the arrival of the Spaniards in these parts, their number is greatly decreased, so that at present there are very few remaining. The flesh of these animals is not so good as that of the Guanacos; and they are only sought after for their fleece, and the bezoar they produce. The method of taking them proves their extreme timidity, or rather their weakness. The hunters having driven the flock into a narrow passage, across which they have stretched a rope about four feet from the ground, with a number of pieces of linen or cloth hanging on it, the animals are so intimidated at the rags agitated by the wind, that they stop, and, crowding together in a heap, the hunters kill great numbers of them with the greatest ease; but if there are any Guanacos among the flock, which are less timid than the Pacos, they leap over the rope with great agility. The example is immediately followed by the whole flock, and they escape the stratagem of their pursuers.

"With respect to the domestic Pacos, they are used to carry burdens like the Llamas; but, being smaller and weaker, they carry much less weight. They are likewise of a more stubborn nature; and, when once they rest with their load, they will suffer themselves to be cut to pieces sooner than rise. The Indians have never made use of the milk of these animals, as they have scarcely enough to supply their own young. The great profit derived from their wool has induced the Spaniards to endeavour to naturalize them in Europe: they have transported them into Spain, in hopes to raise the breed in that country; but the climate not agreeing with their nature, not one of them lived. We are nevertheless persuaded that these animals, which are more valuable than the Llamas, might thrive upon our mountains, especially upon the Pyrenean. Those who brought them into Spain did not consider that they can exist, even in Peru, only in the cold regions; that is, on the tops of the highest mountains; that they are never to be found in the valleys, and die if brought into hot countries; that consequently, in order to preserve them, they should be landed, not in Spain, but in Scotland, and even in Norway, and with greater certainty at the foot of the Pyrenean, Alpine, or other mountains, where they might climb, and attain to the region that most agrees with their nature.

"The Llama is in general a timid and docile animal. If teased or ill-treated, however, they become spiteful. Their mode of manifesting their anger is singular; it consists in darting their saliva in considerable quantity upon the person who offends them. They will cover with it a surface of three or four yards in extent.

"The Vicuna, the wool of which is very valuable, is smaller than the Llama; its limbs are more neatly formed, and it has no protuberance on the breast. It is of a reddish brown on the upper part of the body, and whitish on the lower.

LLAMAS DESCENDING THE ANDES.

"'The Llamas," says the author of 'The Menageries,' "form a secondary group of camels, offering to the eye of the naturalist very small anotamical differences of construction from that of the camel, properly so called. The foot of the Llama is not, like that of the camel, covered with an elastic sole, which joins the two toes. From the absence of this entire sole, the species of South America is enabled to climb the precipices of the Andes, which are its native regions, the toes having strong nails, each of which has a thick cushion or pad below. The Llama also wants the second canine tooth in the lower jaw; but this difference is not, by some, considered such as to require a separation of the genus—for deer of various species have the same deviation from the general type. Again, the absence of the hump in the Llama species is not an anatomical difference which constitutes a character; for, as the skeleton of the Bactrian Camel with two humps does not differ from that of the Arabian with one, so do the bones of the arrangement of the Llama agree precisely with the conformation of the camel. The zebu is an ox, although he has a hump. The ears of the Llama are longer, and the tail is shorter, than those of the camel. The similarities which determine the genus to which the camels and the Llamas belong, are principally these:—1. Each species has very remarkable peculiarities connected with the economy of their reproduction, in which they differ from all other animals. 2. The camel and the Llama differ also from every other species of the class of ruminating animals, in the want of horns, and in having two large incisive teeth on each side of the upper jaw. 3. The stomachs of the camel and the Llama are, in some degree, similarly constructed. Father Feuillee has described the stomach of the Llama; and maintains that it has not only a large reservoir for carrying water, but that, like the stomach of the Camel, it has the same machinery for allowing the separation of solid from liquid aliment. Sir Everard Home, however, describes this portion of the Llama's stomach as only partially resembling that of the camel. He says, 'the stomach has a portion of it, as it were, intended to resemble the reservoirs for water in the camel; but these have no depth, are only superficial cells, and have no muscular apparatus to close their mouths; and allow the solid food to pass into the fourth cavity, or truly digesting stomach, without going into these cells.' But that the Llama has an internal mechanism for retaining water, or secreting a liquid substance, is certain; for, on the summit of the Andes, they are far above any lakes; and it has been observed that, in a state of domestication, they never exhibit a desire to drink whilst they can obtain green pasture. 4. The Llama, according to Molina, (*Storia Nat. del Chili,*) has a conformation resembling the camel's hump, being provided with an excess of nutritive matter, which lies in a thick bed of fat under the skin, and is absorbed as a compensation for an occasional want of food. These remarkable similarities certainly warrant naturalists in classing the camel and the Llama in the same genus, although they differ both in size and form. They are each evidently fitted by nature for the endurance of great hardships and privations—the one amidst the sands of the desert, under a burning sun—the other on the wastes of some of the loftiest mountains of the world, with a region of perpetual snow above them. The slight variations in their conformation, such as that of the foot, are modifications of nature which fit them for their respective localities, and peculiar destinations."

MYTHOLOGY.

PAN.

"Pan is called by that name, either as some tell us, because he exhilarated the minds of all the gods with the music of the pipes, which he invented, and by the harmony of the cithern, upon which he played skilfully as soon as he was born; or perhaps, because he governs the affairs of the universal world by his body.

"The Latins called him Inuus and Incubus, the 'nightmare;' and at Rome he was worshipped, and called Lupercus and Lyceus. To his honour a temple was built at the foot of the Palatine hill, and festivals called Lupercalia were instituted, in which his priests, the Luperci, ran about the streets naked.

"His descent is uncertain, but the common opinion is, that he was born of Mercury and Penelope. For when Mercury fell violently in love with her, and tried in vain to move her, at last, by changing himself into a white goat, he succeeded. Pan, after he was born, was wrapt up in the skin of a hare, and carried to heaven.

"He is represented as a horned half goat, that resembles a beast rather than a man, much less a god. He has a smiling, ruddy face, his nose is flat, his beard comes down to his breast, his skin is spotted, and he has the tail, legs, and feet of a goat; his head is crowned or girt about with pine, and he holds a crooked staff in one hand, and in the other a pipe of uneven reeds, with the music of which he can cheer even the gods themselves.

"When the Gauls, under Brennus their leader, made an irruption into Greece, and were just about to plunder the city Delphi, Pan, so terrific in appearance, alarmed them to such a degree, that they all betook themselves to flight, though nobody pursued them. Whence we proverbially say, that men are in *panic* fear, when we see them affrighted without a cause.

"Pan is a symbol of the world. In his upper part he resembles a man, in his lower part a beast; because the superior and celestial part of the world is beautiful, radiant, and glorious; as is the face of this god, whose horns resemble the rays of the sun, and the horns of the moon: the redness of his face is like the splendor of the sky; and the spotted skin that he wears is an image of the starry firmament. In his lower parts he is shagged and deformed, which represents the shrubs and wild beasts, and the trees of the earth below; his goats' feet signify the solidity of the earth, and his pipe of seven reeds that celestial harmony which is made by the seven planets. He has a sheep-hook, crooked at the top, in his hand, which signifies the turning of the year into itself.

"The nymphs dance to the music of the pipe; which instrument Pan first invented. You will wonder when you hear the relation which the poets give to this pipe, namely, that as oft as Pan blows it, the dugs of the sheep are filled with milk: for he is the god of the shepherds and hunters, the captain of the nymphs, the president of the mountains and of a country life, and the guardian of the flocks that graze upon the mountains.

Pan loves the shepherds, and their flocks he feeds.

"The nymph Echo fell in love with him, and brought him a daughter named Iringes, who gave Medea the medicines with which he charmed Jason. He could but please Dryope, to gain whom he laid aside his divinity, and became a shepherd. But he did not court the nymph Syrinx with so much success: for she ran away to avoid her lover; till coming to a river, (where her flight was stopped,) she prayed the Naiades, the nymphs of the waters, because she could not escape her pursuer, to change her into a bundle of reeds, just as Pan was laying hold of her, who therefore caught the reeds in his arms instead of her. The winds moving these reeds backward and forward, occasioned plaintive sounds, which Pan perceiving, cut them down, and made of them reeden pipes.

He sighs; his sighs the tossing reeds return
In soft small notes, like one that seem'd to mourn;
The new, but pleasant notes the gods surprise,
Yet this shall make us friends at last, he cries:
So he this pipe of reeds unequal fram'd
With wax, and Syrinx from his mistress nam'd.

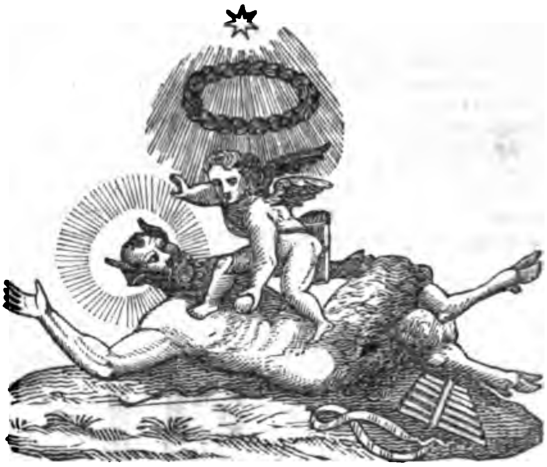
"But Lucretius ascribes the invention of these pipes not to Pan, but to some countrymen, who had observed, on another occasion, the whistling of the wind through reeds.

And while soft ev'ning gales blew o'er the plains,
And shook the sounding reeds, they taught the swains;
And thus the pipe was fram'd, and tuneful reed:
And while the tender flocks securely feed,
And harmless shepherds tune their pipes to love,
And Amaryllis sounds in every grove.

"In the sacrifices of this god, they offered to him milk and honey in a shepherd's bottle. He was more especially worshipped in Arcadia, for which reason he is so often called Pan, Deus Arcadiæ.

"Some derive from him Hispania, Spain, formerly called Iberia; for he lived there when he returned from the Indian war, to which he went with Bacchus and the Satyrs.

The cut below is a representation of a most tragic scene in the history of Pan, which we will explain.



Pan and Cupid had a trial of their prowess in a wrestling match—an affair much celebrated by the poets. Pan was worsted, and thrown flat upon his back. Cupid, not content with this victory, commenced a violent assault on his antagonist, and tore out his heart and bowels. In this act is he represented in the cut before us. We see him with his quiver only, his bow being thrown aside. The syrinx of Pan lies on the ground, separated from its owner. Pan, still glorious in his fall, has his head encircled with radiant beams. Suspended in the air above the combatants, is an olive crown, destined for the conqueror; and still higher a brilliant star.

We will conclude the account of Pan by the story of him related in Higinus, (c. 196.)

"The gods having made their retreat to Egypt, through fear of the fury of Typhon, Pan advised them to change themselves into beasts to elude that giant's pursuit. As an acknowledgment of his salutary counsel, they afterwards placed him among the stars; and inasmuch as he transformed himself into a goat to conceal himself from Typhon, he was called Ægoceros, that is, Capricorn."

MINUTE WONDERS OF NATURE AND ART.

Lewenhoeck, the great microscopic observer, calculates that a thousand millions of animalculæ, which are discovered in common water, are not all together so large as a grain of sand. In the milt of a single codfish there are more animals than there are upon the whole earth; for a grain of sand is bigger than four millions of them. The white matter that sticks to the teeth also abounds with animalculæ of various figures, to which vinegar is fatal, and it is known that vinegar contains animalcules in the shape of eels. A mite was anciently thought the limit of littleness; but we are not now surprised to be told of animals 27 millions of times smaller than a mite. Monsisa de l'Isle has given the computation of the velocity of a little creature scarce visible by its smallness, which he found to run three inches in half a second: supposing now its feet to be the fifteenth part of a line, it must make 500 steps in the space of three inches, that is, it must shift its legs 500 times in a second, or in the ordinary pulsation of an artery. *See Hist. Acad.* 1711, page 23. The itch is known to be a disorder arising from the irritation of a species of animalculæ found in the pustules of that aliment; it is a very *minute animal*, in shape resembling a tortoise, of a whitish colour, but darker on the back than elsewhere, with some long and thick hairs issuing from it, very nimble in its motion, having six legs, a sharp head, and two little horns. The proboscis of a butterfly, which winds round in a spiral form, like the spring of a watch, serves both for mouth and tongue, by entering into the hollows of flowers, and extracting their dews and juices. The seeds of strawberries rise out of the pulp of the fruit, and appear themselves like strawberries when viewed by the microscope. The farina of the sun-flower seems composed of flat, circular, minute bodies, sharp-pointed round the edges; the middle of them appears transparent, and exhibits some resemblance to the flower it proceeds from. The powder of the tulip is exactly shaped like the seeds of cucumbers and melons. The farina of the poppy appears like pearl-barley. That of the lily is a great deal like the tulip. The hairs of men are long tubular fibres through which the blood circulates. The sting of a bee is a horny sheath or scabbard, that includes two bearded darts: the sting of a wasp has eight beards on the side of each dart, somewhat like the beards of fish-hooks. The eyes of gnats are pearled, or composed of many rows of little semi-circular protuberances ranged with the utmost exactness. The wandering or hunting spider, who spins no web, has two tufts of feathers fixed to its fore paws of exquisite beauty and colouring. A grain of sand will cover 200 scales of the skin, and also cover 20,000 places where perspiration may issue forth. Mr. Baker has justly observed with respect to the Deity, that with Him "an atom is a world, and a world but as an atom."

Mr. Power says he saw a golden chain at Tredescant's Museum, South Lambeth, of three hundred links, not more than an inch in length, fastened to and pulled away by a flea. And I myself, (says Baker, in his Essay on the Microscope,) have seen very lately, near Durham-yard, in the Strand, and have examined with my microscope, a chaise (made by one Mr. Boverick, a watch-maker) having four wheels, with all the proper apparatus belonging to them, turning readily on their axles: together with a man sitting in the chaise; all formed of ivory, and drawn along by a flea without any seeming difficulty. I weighed it with the greatest care I was able, and found the chaise, man, and flea were barely equal to a single grain. I weighed also, at the same time and place, a brass chain made by the same hand, about two inches long, containing two hundred links, with a hook at one end, and a padlock and key at the other, and found it less than the third part of a grain. I likewise have seen a quadrille table, with a drawer in it, an eating table, a sideboard table, a looking-glass, twelve chairs with skeleton backs, two dozen plates, six dishes, a dozen knives, and as many forks, twelve spoons, two salts, a frame and castors, together with a gentleman, lady, and footman, all contained in a *cherry stone*, and not filling much more than half of it." At the present day are to be purchased cherry stones highly polished, with ivory screws, which contain each 120 perfect silver spoons, an ingenious bauble worthy the patronage of the juvenile part of the community. We are told that one Oswald Merlinger made a cup of a pepper-corn, which held twelve hundred other little cups, all turned in ivory, each of them being gilt on the edges, and standing upon a foot; and that, so far from being crowded or wanting room, the pepper-corn would have held four hundred more. One penny worth of crude iron can by art be manufactured into watch-springs, so as to produce some thousand pounds.—*London Mirror*.

CURIOUS TITLES AND QUAINTNESS.

These titles were common in the time of Charles I. and Cromwell. We select the following as samples.

In 1626 a pamphlet was published in London entitled, "A most delectable, sweet perfumed nosegay, for God's Saints to smell at." About the year 1646, there was published a work entitled, "A pair of bellows, to blow off the dust cast upon John Fry;" and another called, "The Snuffers of Divine Love." Cromwell's time was particularly famous for title pages. The author of a book on charity entitles his book, "Hooks and Eyes for Believers' Breeches;" and another, who professed a wish to exalt poor human nature, calls his labours, "High heeled shoes for Dwarfs in Holiness;" and another, "Crumbs of Comfort for the Chickens of the Covenant." A Quaker, whose outward man the powers thought proper to imprison, published, "A Sigh of Sorrow for the sinners of Zion, breathed out of a hole in the Wall of an Earthen Vessel, known among men by the name of Samuel Fish." About the same time there was also published, "The spiritual Mustard Pot, to make the soul sneeze with Devotion." Salvation's Vantage Ground! of a Louping Stand for Heavenly Believers;" another, "A Shot aimed at the Devil's Head Quarters, through the Tube of the Cannon of the Covenant." This is an author who speaks plain language, which the most illiterate reprobate cannot fail to understand. Another, "A Reaping Hook well tempered for the stubborn Ears of the coming Crop, or Biscuits baked in the oven of Charity, carefully conserved for the Chickens of the Church, the Sparrows of the Spirit, and the Sweet Swallows of Salvation." To another we have the following copious description,—"Seven Sobs of a Sorrowful Soul for Sin, or the Seven Penitential Psalms of the Princely Prophet David, whereunto are also annexed William Humuis's handful of Honey-suckles, and divers Godly and pithy Ditties now newly augmented."

THE EMPIRE STATE.

There is more meaning than at first meets the eye in this expression of "Empire State," though it is sometimes used ironically. The resources of this great State are indeed immense, and it requires nothing more than a cursory examination of the picture of her actual condition, to be convinced at once that her gigantic march in the prosperous career she has begun, must at no distant period, give her a controlling power over the destinies of this Union, the magnitude and consequences of which but few appreciate.

1. The surface of the State of New York is larger than England, and when its fertility and mineral and other resources and advantages are considered, is nearly double any of the other largest Sates in the confederacy, covering a space of 45,658 square miles. It is the only State whose territory stretches from the borders of the Atlantic Ocean to the great inland seas, thus forming, by her extensive internavigable communications between those waters, a direct channel into the very heart of the North American continent, and a natural outlet for the greater portion of the immense resources of the Union.

2. Her population is over two millions of souls, of whom more than half a million between the ages of 5 and 15 are constantly receiving the benefits of our admirable system of primary education, to say nothing of the half million of dollars fund annually devoted to that purpose, besides *seven* richly endowed colleges and universities, for the higher branches of instruction.

3. There are 56 counties, 783 towns and cities—128

members of the State Legislature, and 40 representatives in Congress, being precisely one sixth of the whole number of representatives in that body—the State of New-York, in her federative capacity, being thus equal to any six states of the confederacy, supposing the number of representatives to be equally apportioned; and equal to eleven of the states as it now stands—i. e. she in herself has political or sovereign power equivalent to nearly one half of the states of the entire Union!

4. She has 600 miles of canal navigation!—the great key and explanation of all her wealth and power.

5. Assessed real and personal estate, total value near 416 millions of dollars! of which, near 26 millions are in domestic manufactories.

6. Military force near 200,000 men; of which, 14,000 are artillery, and 9,000 cavalry; 340 pieces of ordnance; 70,000 small arms; 10 arsenals; 2 magazines; and extensive fortifications.

7. The naval capabilities of the state may be estimated from the fact, that 1500 square rigged vessels, besides 400 smaller craft, entered the port of New York during the year 1833. Add to this that one fourth, if not one third of the entire revenue of the Union is collected at this western London. When we look upon this graphic outline, in which we may clearly trace out what will be the future dimensions and proportions of the infant Hercules—when we reflect upon our vast territory, capable of accommodating, conveniently, 15,000,000 of souls—our actual relative power and commanding position in the confederacy—our extensive *materiel* for military and naval armaments; our exhaustless wealth, and the enthusiastic pride and spirit of lofty enterprise which pervade every fibre of our industrious community—proud as we ourselves feel of this great state, we tremble at the thought that such an engine of fiscal, military, and political magnitude may, perhaps, be destined to fall into the hereditary possession of some daring demagogue or warlike chieftain, who, while he enlarges this central empire, will, as Rome did, reduce all the other states to the subordinate, servile condition of petty provinces.

Evening Star.

ITEMS OF INTELLIGENCE.

It is said that the celebrated Chinese wall was erected 213 years before the birth of Christ. It is 714 German miles long, 14 feet thick, and 26 feet high; so that with the same materials a wall 1 foot thickness, and 23 in height, might be carried twice round the world.

It is a singular fact, says a French paper, that a Turk cannot have a tooth drawn without previously obtaining permission of the local authority.

Governeur Morris, then resident at Paris, notes the death of Mirabeau in his Diary on the 1st April, 1791, and observes on the 4th that his funeral was attended by more than 100,000 persons!

A horse has a very sweet tooth—when he is unwell and wont drink, mix molasses or coarse brown sugar in the water: he will then drink freely.

Lord Bexley has been elected successor of Lord Teignmouth, as President of the British and Foreign Bible Society.

The widow of the celebrated circumnavigator, Capt. Cook, is still living at Chapman, England, at the age of about 100.

Bernadotte of Sweden has become an advocate of temperance. He has sent a message, with proposals to check the immoderate use of brandy. He intends to limit the working of the distilleries to six months in the year.

By the recent Report of the American Temperance Society, it appears that there are now in this country 7,000 temperance societies, containing 1,200,000 members; 9,000 merchants have given up the sale of ardent spirits, and 3,000 distillers have ceased to make it; 7,000 drunkards have been reclaimed. There are 100,000 members of temperance societies in Great Britain and Ireland; and the cause is making progress in Sweden, Russia, Madras in India, New Holland, and South Africa.

The Government of Vera Cruz has passed a decree abolishing convents and confiscating all the property to the service of the state. The edifices are to be converted into hospitals, and seminaries of learning.

The product of the gold mines of North Carolina, it is said, amount to one million of dollars annually: and one half of the gold coined in the United States is from the mines in that district.

A law of Ohio makes it sufficient cause for divorce, if either party can prove that the other has been an habitual drunkard for two years.

POETRY.

THE MUSING BOY.—N. P. Willis.

There's something in a noble boy,
  A brave, free-hearted, careless one,
With his unchecked, unbidden joy,
  His dread of books and love of fun,
And in his clear and ready smile,
Unshaded by a thought of guile,
  And unrepressed by sadness—
Which brings me to my childhood back,
As if I trod its very track,
  And felt its very gladness.

And yet it is not in his play,
  When every trace of thought is lost,
And not when you would call him gay,
  That his bright presence thrills me most.
  His shout may ring upon the hill,
His voice be echoed in the hall,
  His merry laugh like music trill,
And I in sadness hear it all—
  For, like the wrinkles on my brow,
  I scarcely notice such things now—
But when, amid the earnest game,
He stops, as if he music heard,
And, heedless of his shouted name
  As of the carol of a bird,
Stands gazing on the empty air
As if some dream were passing there—
  'Tis then that on his face I look,
His beautiful but thoughtful face,
  And like a long-forgotten book,
Its sweet, familiar meanings trace,
  Remembering a thousand things
  Which passed me on those golden wings
Which time has fettered now—
  Things that came o'er me with a thrill,
  And left me silent, sad, and still,
And threw upon my brow
  A holier and a gentler cast,
  That was too innocent to last.

'Tis strange how thought upon a child
  Will, like a presence, sometimes press,
And when his pulse is beating wild,
  And life itself is in excess—
When foot and hand, and ear and eye,
Are all with ardor straining high—
  How in his heart will spring
A feeling whose mysterious thrall
Is stronger, sweeter far than all;
  And on its silent wing,
How with the clouds he'll float away,
As wandering and as lost as they!

INFINITY.

A term applied to the vast and the minute, to distances and spaces too great to be expressed in any numbers of measures, or too small to be expressed by any fraction; and one of the incomprehensible, but necessarily existing wonders of the universe; for we can imagine no space, however distant, which there must not be space beyond, nor any atom, however small, which has not an upper and under side. But being located in a definite portion of space, we are more interested, affected, and wrought upon, by the infinitely little through which Providence works upwards, as it were, than by the infinitely great, for the perfect conception of which we are ourselves too small. Such considerations serve more than any others to exalt our conceptions of the Creator of the universe.

INAUGURATION.

The ceremony performed at the coronation of a king, or the investing a person with a new office, as President of the United States, &c.

SECTION X.

HISTORY.

Period Fifth:—*From the calling of Abraham, to the departure of the Israelites from Egypt, being* 430 *years.*

CHINA.

The second dynasty of the Chinese Emperors is said to have commenced A. M. 2238, and to have continued 656 years. It numbered 30 monarchs.

The founder of this dynasty was Ching-tang; an individual possessed of eminent qualities. So great was his modesty, that he was the only one in the empire who thought he was unfit for so important a trust. To such an extreme did his diffidence extend, that he was frequently on the point of resigning his crown; from which, however, he was prevented by his nobles. Verily, this monarch must have been one of ten thousand. History furnishes few cases indeed of extra modesty, on the score of thrones, and crowns, and sceptres. Far better had it been for mankind, had there been many Ching-tangs, instead of the very few that *have* been.

Tayvre, one of the emperors of this dynasty, being once terrified by a prodigy, which he supposed to foretoken a revolution, received a most impressive and salutary lesson from his minister. "Virtue," said this faithful public servant of his Majesty, "has the power of triumphing over presages. If you govern your subjects with equity, you will be beyond the reach of misfortune."

Vuthing, another prince of this dynasty, having for three years invoked heaven to endow him with the virtues requisite to his station, is said to have seen, in a dream, a man destined to be his prime minister, whose features he retained in recollection when awake. He then caused a search to be made for him. He was at length found at work in a village, in the capacity of an obscure mason, and was brought to court. His replies to various questions on points of government were such as to astonish the auditors, on account of the wisdom with which they were characterized. The Emperor, addressing him in a very appropriate manner, immediately appointed him his prime minister, and received from him the most efficient aid in the administration of his government.

We would have our readers bear *it* continually in mind, that much of the history of the early times which we are now considering is to be received with caution; and more particularly Chinese history. China has been but little known to the rest of the world from time immemorial. Her only mode of recording events at all has been by hieroglyphics. Her most ancient books were not explained till 1700 years after they were written. The Chinese themselves confess that their antiquities are in a great measure fabulous. Their numbers are sometimes mistaken, and months are put for years. In addition to this, about 200 years before Christ, Xi Hoam ti, one of the Chinese Emperors, ordered all the monuments of antiquity, relating either to history or philosophy, to be destroyed, and put many of the learned Chinese to death; so that but few ancient fragments of Chinese history have survived; and even these, it seems, are blended with fable. The reader will therefore understand in what light he is to regard the details of early Chinese history. We shall not vouch for its authenticity, but merely give it as we find it, leaving each one to form his own opinion relative to the degree of credibility to which it is entitled.

BABYLONIA AND ASSYRIA.

We left these two monarchies united under the government of Ninyas. After him occurs a chasm in their history for the space of 800 years. We find this circumstance accounted for by Berosus as follows:—"Nabonasar collected all the mementos of the kings prior to himself, and destroyed them, that the enumeration of the Chaldean kings might commence with him."—Syncel. Chron. 207. Megasthenes has the following:—"It is said that from the beginning all things were water, called the sea (Thaleth?) that Belus caused this state of things to cease, and appointed to each its proper place, and surrounded Babylon with a wall: but in process of time this wall disappeared: and Nabuchodonosor walled it in again," &c.—Euseb. Præp. Evan. lib. 10.—Euseb. Chron. 40. Thus it appears from all the circumstances of the case, that there is no history extant of the Chaldean or Assyrian empire for a long period after Ninyas.

"There is, however, a dynasty of Chaldæan kings, handed down as some suppose by Berosus, of which the following is a list of the names.

Evechous	6 Years.
Chomasbolus	7 Years.
Porus	35 Years.
Nechobes	43 Years.
Abius	45 Years.
Oniballus	40 Years.
Zinzirus	45 Years.

"These Mr. Faber conjectures to have been the immediate descendants and successors of Nimrod in Nineveh, the new seat of his empire after the catastrophe at Babylon; and that the long continuation of Assyrian monarchs are the descendants of the same patriarch, but of a younger branch. Bryant fancies he recognises among them the predecessors of Nimrod, and thinks the list altogether spurious.

"There is also a dynasty of Arabian kings of Chaldæa, who seem to have taken possession of Babylon during the long period of its desolation, and to have reigned there independent of the Assyrian empire. They were six in number, five of whose names are preserved.

1. Mardocentes	45 Years.
2. Sisimadacus	28 Years.
3. Gabius	37 Years.
4. Parannus	40 Years.
5. Nabonnabus	25 Years.
6. ———	41 Years.

"They are to be found in Syncellus."

CANAAN.

The land of Canaan, in the earliest period of its history, as well as afterwards, was liable to famine. Shortly after Abraham commenced his journeyings in that country, he was under the necessity of leaving it for a time on this account, and of going to Egypt.

The Canaanites figured early in history. Soon after the return of Abraham from Egypt, whither he had gone to escape the famine above-noticed, a war broke out between several of the Canaanite powers on the one side, and several neighbouring powers on the other. The history of this war we will give in the words of Scripture, as contained in the fourteenth chapter of Genesis. It is a very curious document of olden times, and gives a graphic view of the wars of infant nations.

"It came to pass in the days of Amraphel king of Shinar, Arioch king of Ellasar, Chedorlaomer king of Elam, and Tidal, king of nations, that these made war with Bera king of Sodom, and with Birsha king of Gomorrah, Shinab king of Admah, and Shemeber king of Zeboiim, and the king of Bela, which is Zoar. All these were joined together in the vale of Siddim, which is the salt sea. Twelve years they served Chedorlaomer, and in the thirteenth year they rebelled. And in the fourteenth year came Chedorlaomer, and the kings that were with him, and smote the Rephaims in Ashteroth Karnaim, and the Zuzims in Ham, and the Emims in Shaveh Kiriathaim, and the Horites in their mount Seir, unto El-paran, which is by the wilderness. And they returned, and came to Enmishpat, which is Kadesh, and smote all the country of the Amalekites, and also the Amorites that dwelt in Hazezon-tamar. And there went out the king of Sodom, and the king of Admah, and the king of Zeboiim, and the king of Bela (the same is Zoar;) and they joined battle with them in the vale of Siddim; with Chedorlaomer the king of Elam, and with Tidal king of nations, and Amraphel king of Shinar, and Arioch king of Ellasar; four kings with five. And the vale of Siddim was full of slime-pits; and the kings of Sodom and Gomorrah fled, and fell there; and they that remained fled to the mountain. And they took all the goods of Sodom and Gomorrah, and all their victuals, and went their way. And they took Lot, Abram's brother's son, who dwelt in Sodom, and his goods, and departed.

"And there came one that had escaped, and told Abram the Hebrew; for he dwelt in the plain of Mamre the Amorite, brother of Eschol, and brother of Aner; and these were confederate with Abram. And when Abram heard that his brother was taken captive, he armed his trained servants born in his own house, three hundred and eighteen, and pursued them unto Dan. And he divided himself against them, he and his servants, by night, and smote them, and pursued them unto Hobah, which is on the left hand of Damascus. And he brought back all the goods, and also brought again his brother Lot, and his goods, and the women also, and the people.

"And the king of Sodom went out to meet him after his return from the slaughter of Chedorlaomer, and of the kings that were with him, at the valley of Shaveh, which is the king's dale. And Melchizedek king of Salem brought forth bread and wine: and he was the priest of the most high God. And he blessed him and said, Blessed be Abram of the most high God, possessor of heaven and earth: and blessed be the most high God, which hath delivered thine enemies into thy hand. And he gave him tithes of all. And the king of Sodom said unto Abram, Give me the persons, and take the goods to thyself. And Abram said to the king of Sodom, I have lifted up mine hand unto the Lord, the most high God, the possessor of heaven and earth, that I will not take from a thread even to a shoe-latchet, and that I will not take any thing that is thine, lest thou shouldest say, I have made Abram rich: save only that which the young men have eaten, and the portion of the men which went with me, Aner, Eschol, and Mamre; let them take their portion."

MYTHOLOGY.

THE BACCHANTES.

"The expedition of Bacchus to India, is a beautiful and sublime fiction. With an army of both men and women, who went on in a joyful tumult, he extended his beneficent conquests as far as the Ganges, teaching the conquered nations the cultivation of the vine, together with a higher enjoyment of life, and giving them laws. In the divine person of Bacchus, men revered the more cheerful delights of life, as a particular, sublime being, who, under the form of an eternally flourishing youth, subdues lions and tigers, that draw his chariot, and who, in divine ecstasy, accompanied by the sound of flute and timbrels, proceeds in triumph from east to west through all countries.

"This victorious expedition, undertaken for the benefit of the nations on earth, was accomplished by Bacchus in three years, for which reason the festivals afterwards instituted in remembrance of it, were always celebrated after an interval of three years.* Then the joyful tumult which accompanied the march of the god through the earth was repeated, and echoed anew from every hill and every mountain. The priestesses of the god of wine, roaming with dishevelled hair upon the mountains, filled the air with noise, proceeding from the beating of timbrels, playing on flutes, and the wild continual cry, Evoe Bacchus! The threatening thyrsus† in their hands, from which the coloured ribands waved, while the pine apple on its top concealed the wounding point, is an emblem of the expedition to India, on occasion of which the clamour of war and din of battle were hidden under song, and playing on flutes.

"These inspired priestesses of Bacchus afforded a sublime subject to ancient poetry. A Bacchante, in her ecstasy, was as if raised above the bounds of humanity. Inspired by the power of the deity, the boundaries of human life were too narrow for her. Thus an ancient poet describes such an inspired personage as on the top of a mountain, which she had unconsciously ascended; she suddenly awakes from her mental slumber, and beholds beneath her the river Hebrus, and all Thrace covered with snow. 'The danger is sweet, thus to follow the god whose temples are encircled with verdant leaves.' The very straining of all the powers, thus climbing up a steep mountain, in wild inspiration, is what renders this picture so beautiful.

"Even old age is to be seen in Bacchus' retinue, intoxicated by the sweet juice of the grape, and staggering about with uncertain step. The most conspicuous figure in the train, however, is old Silenus, riding with heavy head on his ass, supported by Satyrs and Fauns, and making, in this state, the most charming contrast in the youthful picture."

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*They are known under the name of Dyonisia, or Bacchanalian Festivals.

† The thyrsus was a dart, or small spear, entwined with ivy or the vine leaves, borne by the devotees of Bacchus.

Besides the Bacchantes, or regular priestesses of Bacchus, there were two other classes of beings that belonged to his train. They were denominated the Satyri or Satyrs, and *the Fauni* or Fauns. We will notice each of these classes separately.

THE SATYRI OR SATYRS.

The Satyrs were monsters having the horns, legs, and feet of goats, and the bodies of men. The cut below is a representation of one of them, sacrificing to Bacchus, by pouring wine from a horn upon an altar.

The Satyrs were, according to some, the offspring of those nymphs called Naiades, who presided over fountains. Their abode was the deep recesses of the forest. They were of the most libidinous character imaginable.

THE FAUNI OR FAUNS.

The Fauns differ from the Satyrs in name only; at least they are not unlike them in their looks: for they have hoofs and horns. When they meet drunken persons, they stupify them with their looks alone. The boors of the country call them the 'rural gods,' and pay them the more respect, because they are armed with horns and nails, and painted in terrible shapes.

FAUNUS, OR FATUELLUS.

"Faunus, or Fatuellus, was the son of Picus, king of the Latins. He married his own sister, whose name was Fauna or Fatuella; he consecrated and made her priestess; after which she had the gift of prophecy. History likewise tells us that this Faunus was the father and prince of the other fauns and satyrs. His name was given him from his skill in prophesying; and thence also *fatus* signifies both persons that speak rashly and inconsiderately, and enthusiasts; because they who prophesy deliver the mind and will of another, and speak things which themselves many times do not understand."

SILVANUS.

"Silvanus has the feet of a goat, and the face of a man, of little stature. He holds cypress in his hand stretched out. He is so called from *silva*, the woods; for he presides over them. He loved the boy Cyparissus, who had a tame deer, in which he took great pleasure. Silvanus by chance killed it; upon which the youth died for grief. Therefore Silvanus changed him into a cypress-tree, and carried a branch of it always in his hand, in memory of his loss."

SILENUS.

"Silenus follows next, with a flat nose, bald head, large ears, and with a small flat body: he derives his name from his [illegible] [illegible] because he perpetually jests upon the people. He sits upon a saddle-backed ass; but when he walks, he leans upon a staff. He was foster-father to Bacchus his master, and his perpetual companion, and consequently was almost always drunk, as we find him described in the sixth Eclogue of Virgil. The cup which he and Bacchus used was called Canthrus; and the staff with which he supported himself, Ferula: this he used when he was so drunk, as it often happened, that he could not sit, but fell from his ass.

"The Satyrs were not only constant companions of Silenus, but were assistants to him; they held him in great esteem, and honoured him as their father; and when they became old, they were called Sileni too. And concerning Silenus's ass, they say that he was translated into heaven, and placed among the stars, because in the Giants' war, Silenus rode on him, and helped Jupiter very much.

"When Silenus was asked, 'What was the best thing that could befall man?' he, after long silence, answered: 'It is best for all never to be born, but being born, to die very quickly.' Which expression Pliny reports nearly in the same words: There have been many who have judged it happy never to have been born, or to die immediately, after one's birth.

"Notwithstanding the ridicule which is brought upon the person of Silenus, he is often represented in the fictions of the ancients as a being of high mental powers. A profound knowledge of divine things is ascribed to him, and his very drunkenness is emblematically interpreted by the giddiness into which profound meditation on the most sublime subjects has thrown him, and not the immoderate use of the sweet juice of the grape. He was also associated with the wise centaur Chiron, as the tutor of young Bacchus.

"Two youthful shepherds finding Silenus sleeping through intoxication, bound him, in order that the god, whom mortals could fetter in his sleep, might ransom himself by granting some request, while the nymph Ægle painted his cheeks with the red juice of berries. When old Silenus awoke, the swains promised him his liberty, on condition that he would give them a lay; he acquiesced. Profound wisdom flowed from those lips which were commonly wet with the nectar drink that the vine yields. He chants forth the origin of things, and their miraculous change. The swains listen with rapture to his song, which equals their highest wishes. This charming fiction shows, also, how artfully the ancients knew how to veil the ridiculous itself with dignity, and always to find out that point which seems to us to be lost—the point where smiling sport and heavenly sublimity seem to unite. At Elis, in Greece, Silenus had a temple of his own, and was worshipped as a higher being."

PRIAPUS.

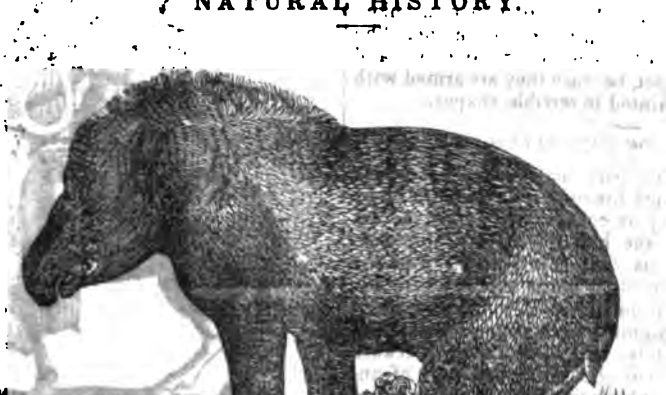
"Priapus, painted with a sickle in his hand, was the son of Venus and Bacchus, born at Lampsacus; from whence he was banished, till by the oracle's command he was recalled, and made god of the gardens, and crowned with garden herbs. He carries a sickle in his hand, to cut off from the trees all superfluous boughs, and to drive away thieves and beasts, and mischievous birds; whence he is called Avistupor. His image is usually placed in gardens, as we may learn from Tibullus, Virgil, and Horace. He is called Hellespontiacus by the poets; because the city Lampsacus, where he was born, was situate upon the Hellespont. He was very deformed, which misfortune was occasioned by the ill usage that his mother suffered from Juno. He was named Priapus, Phallus, and Fascinum, from his deformity. All these names have an indecent signification; though by some he is called Bonus Dæmon, or the good Genius.

ARISTÆUS.

"Aristæus was employed in drawing oil from the olive, which art he first invented. He also found out the use of honey. For these two profitable inventions, the ancients paid him divine honours.

"He was otherwise called Nomius and Agræus, and was the son of Apollo by Cyrene; or, as Cicero says, the son of Liber Pater, educated by the nymphs, and taught by them the art of making oil, honey, and cheese. He fell in love with Euridice, the wife of Orpheus, and pursued her into a wood, where a serpent stung her so that she died. On this account the nymphs hated him, and destroyed all his bees to revenge the death of Euridice. The loss was exceedingly deplored by him; and asking his mother's advice, he was told by the oracle that he ought by sacrifices to appease Euridice. Wherefore he sacrificed to her four bulls and four heifers, and his loss was supplied; for suddenly a swarm of bees burst forth from the carcasses of the bulls."

NATURAL HISTORY.



THE TAPIR, OR THE ANTA.

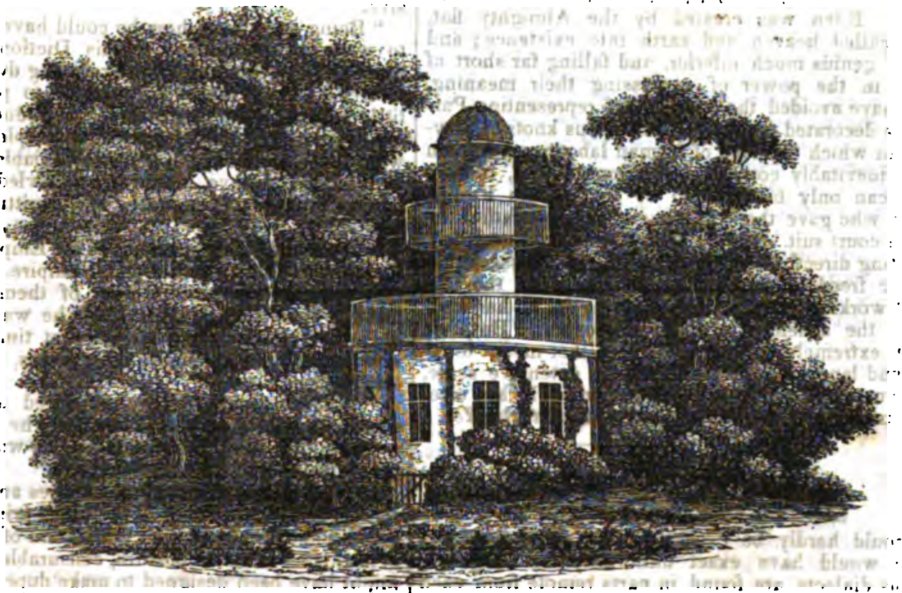
"This animal is, with the exception of the horse, the largest animal in America. The animals also of South America, which alone properly and originally belong to this New Continent, are almost all without defence, without horns, and without tails; their bodies and their limbs are disproportioned; and some, as the sluggish and crawling animals &c. are of so miserable a nature, that they scarcely have the faculties of moving or of eating; they drag on a languishing life in the solitude of a desert, and cannot subsist in the inhabited world, where men and powerful animals would have soon destroyed them.

"The Tapir is of the size of a small cow, or zebu, but without horns, and with a short naked tail; the legs are short and thick, and the feet have small black hoofs. The body is thick and clumsy, the back somewhat arched, and the hair of a dusky or brownish colour. On the short thick neck is a kind of bristly mane, which, near the head, is an inch and a half in length. His head is of a tolerable size, with roundish, erect ears, and small eyes, and the muzzle terminates in a kind of proboscis, which can be extended or contracted at the will of the animal. The latter it uses in feeding, to grasp its food and convey it to the mouth, in the same way that the rhinoceros applies its upper lip; and in this are also contained the organs of smell. He has ten incisive teeth and ten grinders in each jaw; a character which separates him entirely from the ox, and other ruminating animals. His skin is so thick and hard as to be almost impenetrable to a bullet; for which reason the Indians make shields of it.

"The Tapir seldom stirs out but in the night, and delights in the water, where he oftener lives than upon land. He is chiefly to be found in marshes, and seldom goes far from the borders of rivers or lakes. He swims and dives with singular facility. When he is threatened, pursued, or wounded, he plunges into the water, and remains there till he has got to a great distance before he re-appears. These customs, which he has in common with the hippopotamus, have made some naturalists imagine him to be of the same species; but he differs as much from him in nature, as he is distant from him in climate. To be assured of this, there needs no more than to compare the description we have now recited, with that of the hippopotamus. Although the Tapir inhabits the water, he does not feed upon fish; and although his mouth is armed with twenty sharp and incisive teeth, he is not carnivorous: he lives upon sugar canes, grasses, the leaves of shrubs, and various kinds of fruit; and does not make use of what Nature has armed him with against other animals. He is of a mild and timid nature, and flies from every attack or danger: when, however, he is cut off from retreat, he makes a vigorous defence against dogs and men. Its usual attitude is that of sitting on its rump like a dog; and its voice is a kind of whistle. The flesh is wholesome food. It may be tamed, and is then very gentle and docile. This animal is commonly found in Brazil, Paraguay, Guiana, and in all the extent of South America, from the extremity of Chili to New Spain.

"A species of Tapir which has recently been discovered, is very common in the island of Sumatra and the forests of Malacca. Its body is of a dirty white, while the head, legs, and tail are of a deep black. This species has no mane, and its proboscis is from seven to eight inches long.

"Among the numerous fossil remains of a former world are found fragments of Tapirs of enormous size. One of these extinct species, the gigantic Tapir, must have been more than equal to the elephant in magnitude."



LANDSCAPE GARDENING.

The garden, at first intended merely for producing esculent vegetables, fruits, and flowers, began to assume another character as soon as the increase of civilization tempted the feudal baron to step a little way out of the limits of his fortifications, and permitted his high dame to come down from her seat upon the castle walls, so regularly assigned her by ancient minstrels, and tread the neighbouring precincts which art had garnished for her reception. These gardens were defended with walls, as well for safety as for shelter; they were often surrounded with fosses, had the command of water, and gave the disposer of the ground an opportunity to display his taste, by introducing canals, basins, and fountains, the margins of which admitted of the highest architectural ornament. As art enlarged its range, and the nobles were satisfied with a display of magnificence, to atone for the abridgement of their power, new ornaments were successively introduced; banqueting houses were built; terraces were extended and connected by staircases and balustrades, of the richest forms. The result was, indeed, in the highest degree artificial; but it was a sight beautiful in itself—a triumph of human art over the elements; and, connected as these ornamental gardens were with splendid mansions of the same character, there was a symmetry and harmony between the baronial palace itself, and these its natural appendages, which recommended them to the judgment as well as the eye. The shrubs themselves were artificial, inasmuch as they were either exotic, or, if indigenous, were treated in a manner and presented an appearance which was altogether the work of cultivation. The examination of such objects furnished amusement to the merely curious, information to the scientific, and pleasure at least to those who only looked at them, and passed on. Where there was little extent of ground, especially, what could be fitter for the amusement of "learned leisure, than those trim gardens" which Milton has represented as the chosen scene of the easy and unoccupied man of letters. He had there around him the most delightful subjects of contemplation, in the fruits and flowers, the shrubs and trees, many of them interesting from their novelty and peculiar appearance and habits, inviting him to such studies as lead from created things up to the almighty Creator. This sublime author, indeed, has been quoted, as bearing a testimony against the artificial taste of gardening in the times when he lived, in those well-known verses,—

> "Flowers worthy of Paradise, which not nice art
> In beds and curious knots, but Nature boon
> Poured out profuse on hill and dale and plain,
> Both where the morning sun first warmly smote
> The open field, and where the unpierced shade
> Embrowned the noon-tide bowers. Then was this place
> A happy rural seat of various view."

This passage expresses exquisitely what park scenery ought to be, and what it has in some cases actually become; but we think the quotation has been used to authorize conclusions which the author never intended. Eden was created by the Almighty fiat, which called heaven and earth into existence; and poets of genius much inferior, and falling far short of Milton in the power of expressing their meaning, would have avoided the solecism of representing Paradise as decorated with beds and curious knots of flowers, with which the idea of human labour and human care is inevitably connected—an impropriety, indeed, which can only be equalled by that of the French painter, who gave the skin dress of our first father the cut of a court suit. Milton nobly conceived that Eden, emanating directly from the Creator, must possess that majestic freedom which characterizes even the less perfect works of nature; and, in doing so, he has anticipated the schemes of later improvers. But, we think it extremely dubious, that he either meant to recommend landscape gardening on an extensive scale, or to censure those "trim gardens," which he has elsewhere mentioned so affectionately.—*Quarterly Rev.*

LITERATURE.

LANGUAGE OF THE CHINESE.

It could hardly be expected, that so numerous a people would have exact uniformity in language. Various dialects are found in parts remote from each other; so that the inhabitants of the south could hardly be understood at the north. The *spoken* language is composed of monosyllables, with so little difference of sound, that an American could not distinguish more than about 350 terms. By various intonations and inflections of the voice, however, these are made to answer the usual purposes of conversation. The *written* language is unlike, in the manner of its formation, every other of which we have any knowledge. They have no alphabet, but every character stands for a word; so that there are as many characters as words. The whole number is about 80,000, not more than half of which, however, are in common use. Every one almost has seen them on chests of tea, which are imported from China. The art of printing was known here long before its discovery in Europe. Moveable metal types have not been used, and are not, perhaps, so well adapted to the language, as the wooden blocks on which their pages are engraved, after the manner, somewhat, of stereotyping. The children are every where taught to read; and this written language is understood throughout the empire, and in several of the neighbouring countries. The writings of Confucius, the great prophet and philosopher of China, who lived more than 2000 years ago, are to the Chinese what the Bible is to us. These have contributed vastly to the sameness of the language.—No other language on earth has so many readers. It is the medium of communication for one third at least, of the human family.—*St. Louis Observer.*

LIBERTY OF THE PRESS IN CHINA.

Dangers attending Authorship in China, illustrated by the Fate of Whang-see-Heou, whose crime is thus set forth in the Report of his Judges.

"We find," say they—"1. That he has presumed to meddle with the great Dictionary of Kang-hi; having made an abridgment in it, in which he has had the audacity to contradict some passages of that excellent and authentic work. 2. In the preface to his abridgment, we have seen with horror that he has dared write the little names (that is, the primitive family names) of Confucius, and even of your Majesty—a temerity, a want of respect, which has made us shudder. 3. In the genealogy of his family and his poetry, he has asserted that he was descended from the Whang-tee.

"When asked why he had dared meddle with the great Dictionary of Kang-hi, he replied—That Dictionary is very voluminous and inconvenient; I have made an abridgment which is less cumbersome and expensive.

"Being questioned how he could have the audacity to write in the preface to this Dictionary the little names of the emperors of the reigning dynasty, he answered—I know that it is unlawful to pronounce the little names of the Emperors. I introduced them into my Dictionary, merely that young people might know what those names were, and not be liable to use them by mistake. I have, however, acknowledged my error, by reprinting my Dictionary, and omitting what was amiss."

"We replied that the names of the Emperor and Confucius were known to the whole empire. He protested that he had long been ignorant of them, and that he had not known them himself till he was thirty years old, when he saw them for the first time in the hall, where the literati compose their pieces, in order to obtain degrees.

"When asked how he had dared assert that he was descended from the Whang-tee, he said:—It was a vanity that came into my head. I wanted to make people believe that I was somebody."

If there were in these three charges any thing really reprehensible, according to the broad principles of universal morality, it was the fabrication of an illustrious genealogy. This imposture, censurable in any case, might have been designed to make dupes, and perhaps to form a party; but the Judges of Whang-see-heou attached less importance to this charge than to the other two. They declared the author guilty of high-treason on the first charge, and pronounced this sentence:—

According to the laws of the empire, this crime ought to be rigorously punished. The criminal shall be cut in pieces, his goods confiscated, and his children and relatives above the age of sixteen years put to death. His wives, his concubines, and his children, under sixteen, shall be exiled, and given as slaves to some grandee of the empire."

The Sovereign was graciously pleased to mitigate the severity of this sentence, in an edict to this effect.

"I favour Whang-see-heou in regard to the nature of his punishment. He shall not be cut in pieces, and shall only have his head cut off! I forgive his relatives. As to his sons, let them be reserved for the great execution in autumn. Let the sentence be executed in its other points: such is my pleasure."

NAPOLEON ON SUICIDE.

In the journal of Dr. Warden, English Surgeon on board the Northumberland frigate, which conveyed Bonaparte to St. Helena, we find recorded the following remarkable sentiments of the imperial prisoner, as expressed to Warden.

"In one paper I am called a *liar*, in another a *Tyrant*, in a third a *monster*, and in one of them, which I really did not expect, I am described as a *coward*; but it turned out, after all, that the writer did not accuse me of avoiding danger in the field of battle, or flying from an enemy, or fearing to look at the menaces of fate and fortune; he did not charge me with wanting presence of mind in the field of battle, and in the suspense of conflicting armies—no such thing. I wanted courage, it seems, because I did not coolly take a dose of poison, or throw myself into the sea, or blow out my brains. The editor most certainly misunderstands me; I have at least too much courage for that." On another occasion he expressed himself on suicide in the following terms:—"Suicide is a crime the most revolting to my feelings; nor does any reason suggest itself to my understanding by which it can be justified. It certainly originates in that species of fear which we denominate *poltroonery*. For what claim can that man have to courage who trembles at the frowns of fortune? True heroism consists in being superior to the ills of life, in whatever shape they may challenge him to the combat."

An ingenious, and valuable statistical work published a few years since, states that the number of inhabitants who have lived on the earth, amount to about 36,627,843,275,075,846. The sum, the writer says, when divided by 3,096,000, the number of square leagues of land on the surface of the globe, leaves 11,320,698,732 persons to each square league. There are 27,864,000 square miles of land, which being divided as above, gives about 1,314,522,076 persons to each square mile. Let the miles be reduced to square rods, and the number, he says, will be 1,853,173,600,000, which being divided as above, gives 1283 inhabitants to each square rod, which rod being reduced to feet and divided as above, it will give about five persons to each square foot of terra firma on the globe. Let the earth be supposed to be one vast burying ground, and according to the above statement, there will be 1283 persons to be buried on each square rod, capable of being divided into 12 graves, it appears that each grave contained 110 persons, and the whole earth has been *one hundred times dug over to bury its inhabitants!* supposing they had been equally distributed.

The Journal of Commerce, in commenting on the foregoing calculation, says the writer must have been of the Voltaire or Chinese school; and shows that the supposed numbers are altogether too high.

WHAT TO DO WITH IT.

Mr. Editor.—Many persons ask, 'what shall we do with it?' when we persuade them to abandon ardent spirit. I answer, destroy your enemies with it. The house of an inn-keeper of my acquaintance was very much infested with vermin; he resorted to many different methods, but could not destroy them; at length he thought of the effect ardent spirits had upon his two-legged customers, and he resolved to make an experiment. Accordingly he prepared a pan of black-strap, set it in the cellar, and waited the event. The next morning he found fourteen large RATS lying helpless around the pan. It is needless to add, he pursued this device until his house was cleared of rats and mice.

A farmer's corn was much annoyed by a bear, which he was not able to destroy until he thought of RUM. He procured a vessel of well sweetened rum, and the next morning bruin was too rich and happy to go or stand. A few have found that corn, strongly saturated with rum, will take away the use of leg and wing from crows. One old farmer told me last summer that grasshoppers loved it too. Now I say, neither throw away nor burn ardent spirits, nor for conscience' sake murder human beings with it—but destroy grasshoppers, bears, and crows. Foxes, I presume, are too cunning to drink it.

A. B. N.

Vermont Chronicle.

Autumn is dark on the mountains: gray mist rests on the hills. The whirlwind is heard on the heath. Dark rolls the river through the narrow plain. A tree stands alone on the hill, and marks the slumbering Connal. The leaves whirl round with the wind, and strew the grave of the dead. At times are seen here the ghosts of the departed, when the musing hunter alone stalks slowly over the heath.

Who can reach the source of thy race, O Connal! who recount thy fathers? Thy family grew like an oak on the mountain, which meeteth the wind with its lofty head. But now it is torn from the earth. Who shall supply the place of Connal? Here was the din of arms; here the groans of the dying. Bloody are the wars of Fingal, O Connal! It was here thou didst fall. Thine arm was like a storm: thy sword a beam of the sky; thy height a rock on the plain; thine eyes a furnace of fire. Louder than a storm was thy voice, in the battles of thy steel. Warriors fell by thy sword, as the thistle by the staff of a boy. Dargo the mighty came on, darkening in his rage. His brows were gathered into wrath. His eyes like two caves in a rock. Bright rose their swords on each side: loud was the clang of their steel.

The daughter of Rinval was near; Crimora, bright in the armour of man; her yellow hair is loose behind, her bow is in her hand. She followed the youth to the war, Connal her much beloved. She drew the string on Dargo, but erring she pierced her Connal. He falls like an oak on the plain; like a rock from the shaggy hill. What shall she do, hapless maid? He bleeds; her Connal dies! All the night long she cries, and all the day, "O Connal! my love, and my friend!" With grief the sad mourner dies! earth here encloses the loveliest pair on the hill. The grass grows between the stones of the tomb; I often sit in the mournful shade. The wind sighs through the grass; their memory rushes on my mind. Undisturbed you now sleep together; in the tomb of the mountain you rest alone.

And soft be their rest, said Utha, hapless children of streamy Lotha! I will remember them with tears, and my secret song shall rise; when the wind is in the groves of Tora, when the stream is roaring near. Then shall they come on my soul, with all their lovely grief.—*Ossian.*

As a specimen of the Indian mode of thinking on the subject of religion we give a paragraph from the speech of the famous chief, Red Jacket. When the missionary mentioned the crucifixion, Red Jacket replied—"Brother, if you white men murdered the son of the Great Spirit, we Indians had nothing to do with it, and it is none of our affair. If he had come among us, we would not have killed him, we would have treated him better. You must make amends for that crime yourselves!"

Red Jacket took part with the Americans in the war of 1812, and becoming attached to a colonel, who was ordered on a distant service, took his farewell of him in the following speech.

"Brother, I hear you are going to a place called Governor's Island: I hope you will be a governor yourself. I understand you white people think children a great blessing: I hope you may have a thousand. And above all, I hope, wherever you go, you may never find whiskey more than two shillings a quart."

A chief of the Five Nations met in battle his own father, fighting for the enemy. Just as he was about to deal a deadly blow, he discovered who he was, and said, "You once gave me life; now I give it to you. I have paid the debt I owed you—let me see you no more."

A white man sold some powder to an Indian, telling him if he sowed it in the ground, he might raise his own powder. The Indian watched his ground for a long time with great patience, but at length began to suspect that he had been imposed upon. He said nothing, however, but went to the trader, who had forgotten the trick, and obtained credit for a quantity of goods. When the time of payment came, the trader requested the money, but the Indian, with great complaisance, only replied, "Me pay you when my powder grow!"

An Indian, notorious for his falsehoods, laid the following plan to obtain a drink of cider. He stopped at the house of an acquaintance, and told him that he had just killed a deer, and for a certain sum would tell him where to find it. "You know such a meadow?" said he. Yes. "You know such a tree?" Yes. "Well, under that tree lies the deer." It may be easily supposed that no deer was found. Some time after, the duped man met the Indian, and began to censure him for his deception. "Why," said the Indian, "You find him meadow?" Yes. "You find him tree?" Yes. "Then what for you find fault—me tell you two truth to one lie!"

An Indian woman, in a canoe, being drawn by the current into the rapids of Turner's Falls, in Connecticut river, seized a bottle of rum, and drank it all off at a draught. The boat went down the falls uninjured, and she was found floating in it some miles below, alive, but drunk. Being asked how she dared drink so much in the prospect of certain death? she replied, she "was unwilling that any of it should be lost."

ITEMS OF INTELLIGENCE.

It was recently stated publicly, that there are in London more than half a million of people not in the habit of visiting any place of public worship.

The Laplanders apply their noses to those whom they salute. In New Guinea, they salute an individual by placing leaves on his head. Greenlanders have no mode of salutation at all, but laugh at the idea of one person being inferior to another.

There is said to be an Indian at Mexico, only 18 years of age, who is 8 feet 3 inches is height, and of a most hideous countenance and appearance.

The number of crimes committed in Russia is, in the proportion of them to the population, the smallest of any on the face of the earth; and so true is this, that during the whole of the reign of Alexander, there was not a single instance in which *capital punishment was inflicted.*

Temperance Societies are rapidly forming in Germany. In Sweden the cause is progressing gloriously. A semi-monthly paper devoted to Temperance has lately been established at Stockholm. At a late Temperance meeting, the Crown Prince presided, and openly declared himself the patron of the Society.

A Danish traveller has recently reported some interesting discoveries in the interior of Chili. While exploring the wild regions of the Andes, he discovered on an elevated plain the ruins of a large city concerning which, it would seem, the present natives have not even a tradition; and traces of civilization which were lost with the memories of the original inhabitants.

POETRY.

LINES ON REVISITING THE COUNTRY.—Bryant.

I stand upon my native hills again,
  Broad, round, and green, that, in the southern sky,
With garniture of waving grass and grain,
  Orchards and beechen forests, basking lie;
While deep, the sunless glens are scooped between,
Where brawl o'er shallow beds the streams unseen.

A lisping voice and glancing eyes are near,
  And ever-restless steps of one, who now
Gathers the blossoms of her fourth bright year;
  There plays a gladness o'er her fair young brow,
As breaks the varied scene upon her sight,
Upheaved, and spread in verdure and in light;

For I have taught her, with delighted eye,
  To gaze upon the mountains; to behold,
With deep affection, the pure, ample sky,
  And clouds along the blue abysses rolled
To love the song of waters, and to hear
The melody of winds with charmed ear.

Here I have 'scaped the city's stifling heat,
  Its horrid sounds, and its polluted air;
And where the season's milder fervors beat,
  And gales, that sweep the forest borders, bear
The song of bird and sound of running stream,
Have come awhile to wonder and to dream.

Ay, flame thy fiercest sun: thou canst not wake,
  In this pure air, the plague that walks unseen;
The maize leaf and the maple bough but take
  From thy fierce heats a deeper, glossier green;
The mountain wind, that faints not in thy ray,
Sweeps the blue steams of pestilence away.

The mountain wind—most spiritual thing of all
  The wide earth knows—when, in the sultry time,
He stoops him from his vast cerulean hall,
  He seems the breath of a celestial clime,—
As if from heaven's wide-open gates did flow
Health and refreshment on the world below.

PEA.

A fine edible kind of pulse. Beside their utility for culinary purposes, peas, when harvested dry, and ground into meal, are uncommonly serviceable for fattening hogs, as no other grain agrees better with those animals. If the straw be forward in autumn, and has been housed without injury, it will be little inferior to ordinary hay, and afford a very useful article of fodder, on which every kind of cattle will thrive: and, though it be apt to occasion gripes in horses, if given to them before the month of January, yet such effects may be corrected, by allowing a few turnips, cabbages, or potatoes, either with or after they have eaten the pea straw. In common with all other leguminous fruits, peas possess a stong mucilage, with an earthy basis, and yield a very solid nourishment to persons of vigorous stomachs; but pulse of every description is apt to excite flatulency and costiveness, if eaten too frequently, or in too large quantities. On the other hand, peas boiled in a fresh or green state, are equally wholesome and agreeable, being less flatulent, and more easily digested, than after they have attained maturity.

LOTTERY.

A game of chance in the nature of a bank, wherein are put tickets for sums of money or other things, called prizes, and others of no value, that are called blanks; these being all mixed together, the tickets are drawn at a venture, and each person has the value of the lot drawn to the number of his ticket. Lotteries are often employed by government as a means of increasing the revenue, but the moral mischiefs were so great, that it is now abandoned in England, and ought to be every where.

SECTION XI.

HISTORY.

CANAAN.—Continued.

At an early period of their history, the Canaanites fell into the grossest vices and abominations. The first notice we have of Sodom is, that the men of that place "were wicked, and sinners before the Lord exceedingly." And it appears that the Amorites were at that period an iniquitous race, although their iniquity was not then full. There were indeed exceptions. Melchizedek, king of Salem, was a priest of the most high God. And it is altogether probable that *his* subjects at least were kept under salutary moral restraint. But notwithstanding these exceptions, the general state of society appears to have been deplorable. And especially was this the fact in regard to the cities of the plain, Sodom and Gomorrah. These cities, which will be proverbial through all time as sinks of iniquity and abomination, stood pre-eminent in wickedness where all was wickedness, like Satan among the infernels. "And the Lord said, Because the cry of Sodom and Gomorrah is great, and because their sin is very grievous, I will go down now, and see whether they have done altogether according to the cry of it, which is come unto me; and if not I will know." Abraham, to whom this divine determination was announced, interceded with God in behalf of the devoted cities, and obtained a promise that if ten righteous persons could be found in all Sodom, it should be spared. But alas for the guilty city! not even that small number could be found. Two angels of God made a visit to the place, and took up their night's sojourn with Lot, who who was then residing there. But before they lay down, the house was surrounded by the citizens, old and young, from every quarter, who called to Lot, saying, "Where are the men which came in to thee this night? Bring them out unto us that we may know them." The expostulations of Lot were in vain. Bent on their abominable purpose, they spurned his remonstrance, and came near to break the door. But the angels smote them with blindness, insomuch that they wearied themselves to find it.

It was enough. Nature revolted at the spectacle. Heaven and earth were witness to the damning sin, and combined in one general and united cry for the extermination of so vile a people from the face of day. The cry went up to heaven. It found audience in the ears of the Lord of Sabaoth. Lot, forewarned of the coming ruin, made his escape from the city, and fled to Zoar.

"The sun was risen upon the earth when Lot entered into Zoar. Then the Lord rained upon Sodom and upon Gomorrah brimstone and fire from the Lord out of heaven. And he overthrew those cities, and all the plain, and all the inhabitants of the cities, and that which grew upon the ground. But his wife looked back from behind him, and she became a pillar of salt. And Abraham gat up early in the morning to the place where he stood before the Lord. And he looked toward Sodom and Gomorrah, and toward all the land of the plain, and beheld, and lo! the smoke of the country went up as the smoke of a furnace."

This event, like that of the Deluge, and many others recorded in scripture, has been denied by those who make it a point to reject, against all evidence, whatever claims to be supernatural. But, like the events just alluded to, the one under consideration does not depend solely on the Bible for proof. It is expressly attested by Diodorus Siculus, Strabo, Solinus, Tacitus, Pliny, and Josephus; whose accounts agree in the main with that of Moses.[*]

Nor is this all. The present appearance of the Dead Sea, whose waters now roll o'er that former vale of sin, confirms the voice of history in this particular. "The water," says a late visitant, "looks remarkably clear and pure; but on taking it into my mouth, I found it nauseous and bitter, I think beyond any thing I ever tasted. It has been said, that these waters are so heavy, that the most impetuous winds can scarcely ruffle their surface. Nothing could be more entirely without foundation. The waves ran so high, that I found difficulty in filling some bottles with the water. My clothes were wet by the waves, and as they dried, I found them covered with salt." In addition to this testimony it may be observed, that quantities of bitumen are gathered in the vicinity, which in appearance resembles pitch, but which may be distinguished from it by its sulphureous smell and taste. Pebbles also are found which burn when held in a blaze, producing a very disagreeable smell; but what is particularly remarkable is, that these pebbles remain undiminished in size by burning.

Nothing but the most determined scepticism could induce men to doubt a fact so well attested as that of the destruction of Sodom. To reject it under the circumstances of the case, is to destroy the credibility of all historical testimony, and to lay the foundation for universal uncertainty in relation to the past. That Almighty Power *could* destroy a city in the manner here described, none can deny. That he *did* thus destroy certain cities of Canaan, all history declares, and all circumstances show. Those therefore who doubt under these circumstances, are but poorly entitled to the name of *reasonable* men. And moreover, they should be apprised that they have something to do besides standing and doubting. It is incumbent on them to account for the circumstance, that the current of history in the case has set in a direction contrary to fact, and that there is no counter current in favour of the reality:—incumbent on them to name what species of evidence is requisite to the proof of an historical fact; and then to adduce that evidence in favour of the facts which they themselves receive as history.

We learn but few additional particulars of the Canaanites during this period. It seems there was another famine in their country in the time of Isaac, and another still in the time of Jacob, the latter of which was extremely oppressive, and of great extent. The principal event worthy of note besides, was that of the massacre of the Shechemites by the sons of Jacob, in revenge for the dishonour of their sister Dinah by Shechem, the son of Hamor, who was prince of that country. The account of this event is detailed at some length in the 34th chapter of Genesis.

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[*] Diod. Sic. lib. xix. c. 98, tom. viii. pp. 418—421, edit. Bipont. Strabo, lib. xvi. pp. 1087, 1088, edit. Oxon. Solinus, c. 26. Tacitus, Hist. lib. v. c. 6, (al. 7.) Pliny, Hist. Nat. lib. v. c. 16; lib. xxxv. c. 15. Josephus, de Bell. Jud. lib. iv. c. viii. § 4. Faber, vol. i. pp. 171—174.

NATURAL HISTORY.

THE BUFFALO, THE AUROCHS, THE BISON, AND THE ZEBU.

"Although the Buffalo is, at this present time, common in Greece, and tame in Italy, it was neither known by the Greeks nor Romans; for it never had a name in the language of these people. The word *buffalo* even indicates a strange origin, not to be derived either from the Greek or Latin tongues. In effect, this animal is originally a native of the hottest countries of Africa and India, and was not transported and naturalized in Italy till towards the seventh century. It is true, the ancients have spoken of an animal, as of a different species from the ox, under the name of *bubalus;* and Aristotle has mentioned the wild ox of Pæonia, which he has called *bonasus*. Both the ancients and moderns, however, have multiplied the species unnecessarily; and from attentive observations, I am clearly of opinion that there are but two species which are essentially different, viz. the Ox and the Buffalo.

"We may observe, throughout the different regions of the world, the breed of oxen differing from each other in all external appearances, according to the nature of the climate, or other circumstances; but the most remarkable difference is that which divides them into two classes, viz. the *Aurochs*, or ox without a hunch on its back, and the *Bison*, or hunched ox. From indubitable facts, however, we have the utmost reason to conclude, that these are no other than varieties of the same species. The hunch, the length and quality of the hair, and the form of the horns, are the sole characters by which the Bison is distinguished from the Aurochs; but the hunched oxen couple and produce with our oxen; and we likewise know, that the length and quality of the hair in all animals depends on the nature of the climate; and that, in oxen, goats, and sheep, the form of the horns is various and fluctuating. These differences, therefore, do not suffice to establish two distinct species; and since our tame ox of Europe couples with the hunched ox of India, we have the greatest reason to think that it would also couple with the Bison, or hunched ox of Europe. Notwithstanding this, however, we are not to be surprised, that the two kinds have not melted or coalesced into a mongrel breed, since many circumstances may have occurred to keep them asunder; and, in fact, we actually find that these kinds have subsisted till this present time, either in a free and wild, or in a tame state; and are scattered, or rather have been transported into all the climates of the earth. All the tame oxen without hunches have proceeded from the Aurochs, and all with hunches are issues of the Bison. In order to give a just idea of the varieties, we shall make a short enumeration of these animals, such as they are found actually to be in the different parts of the earth.

"To begin with the north of Europe, the few oxen and cows which subsist in Iceland are without horns, although they are of the same kind as our oxen. The size of these animals is rather relative to the plenty and quality of pasture, than to the nature of the climate. The Dutch have often brought lean cows from Denmark, which fatten prodigiously in their meadows, and which give plenty of milk. These Danish cows are longer than ours. The oxen and cows of Ukraine, where there is excellent pasture, are said to be the largest in Europe; they are also of the same kind as our oxen.

"The breed of Aurochs, or ox without a hunch, inhabits the cold and temperate zones. It is not very much dispersed towards the southern countries; on the contrary, the breed of the Bison, or hunched ox, fills all the southern provinces at this present time. In the whole continent of India; the islands of the South Seas; in all Africa, from Mount Atlas to the Cape of Good Hope, we find, I may say, nothing but hunched oxen; and it even appears, that this breed, which has prevailed in all the hot countries, has many advantages over the others. These hunched oxen, like the Bison, of which they are the issue, have the hair much softer and more glossy than our oxen, who, like the Aurochs, are furnished but with little hair, which is of a harsh nature. These hunched oxen are also swifter, and more proper to supply the place of a horse; at the same time, that they have a less brutal nature, and are not so clumsy and stupid as our oxen, they are more tractable, and sensible which way you would lead them. The regard the Indians have for these animals is so great, as to have almost degenerated into superstition. The ox as the most useful animal, has appeared to them the most worthy of being revered; for this purpose, they have made an idol of the object of their veneration, a kind of beneficent and powerful divinity; for we are desirous of rendering all we respect great, and capable of doing much good or much harm.

"These hunched oxen, perhaps, vary again more than ours, in the colour of the hair and the figure of the horns. The handsomest are all white, like the oxen of Lombardy; there are also some that are without horns; there are others who have them much elevated, and others so bent down that they are almost pendent; it even appears that we must divide this first kind of Bisons or hunched oxen into two secondary kinds; the one very large, and the other very small; and this last is that of the Zebu; both have soft hair, and a hunch on the back. This hunch does not depend on the conformation of the spine, nor on the bones of the shoulder; it is nothing but an excrescence, a kind of wen, a piece of tender flesh, as good to eat as the tongue of an ox. The wens of some oxen weigh about forty or fifty pounds; others have them much smaller; some of these oxen have also prodigious horns for their size: there is one in the French King's cabinet, which is three feet and a half in length, and seven inches in diameter at the base. Many travellers affirm, that they have seen them of a capacity sufficient to contain fifteen and even twenty pints of water.

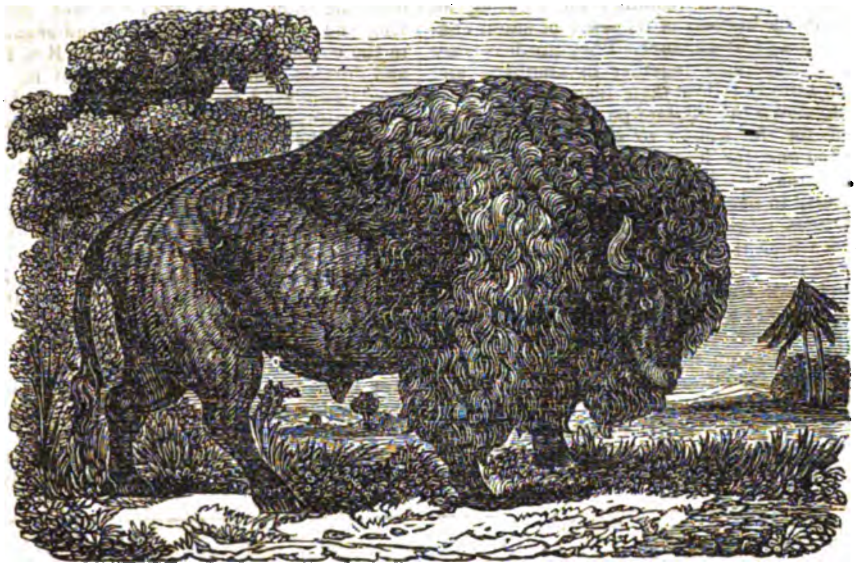
"Thus all the southern parts of Africa and Asia are inhabited with hunched oxen or Bisons, among which a great variety is to be met with in respect to size, colour, shape of the horns, &c. On the contrary, all the northern countries of these two parts of the world, and Europe entirely, comprehending even the adjacent islands, to the Azores, are only inhabited by oxen without a hunch, who derive their origin from the Aurochs. The Bison, or wild hunched ox, is stronger, and much larger than the tame ox of India; it is also sometimes smaller; but that depends only on the quantity of food. At Malabar, at Abyssinia, at Madagascar, where the meadows are naturally spacious and fertile, the Bisons are all of prodigious size. In Africa and Arabia Petræa, where the land is dry, the Zebus or Bisons are of the smallest stature.

"Every part of South America is inhabited by oxen without hunches, which the Spaniards and other Europeans have successfully transported. These oxen are multiplied, and are only become smaller in these countries. In all the northern parts, as far as Florida, Louisiana, and even as far as Mexico, the Bisons, or hunched oxen, are to be found in great numbers. These Bisons, which formerly inhabited the woods of Germany, Scotland, and other northern countries, have probably passed from one continent to the other, and are become, like other animals, smaller in this new world; and as they are habituated to climates more or less cold, they have preserved their coat more or less warm; their hair is longer and thicker; the beard is longer at Hudson's Bay than at Mexico; and, in general, this hair is softer than the finest wool.

"Thus the wild and the tame ox, the European, the Asian, the American, and the African ox, the Bonasus, the Aurochs, the Bison, and the Zebu, are all animals of one and the same species, who, according to the climates food, and different usage they have met with, have undergone all the variations we have before explained. The ox, as the most useful animal, is also the most universally dispersed. He appears ancient in every climate, tame among civilized nations, and wild in desert or unpolished countries; he supports himself by his own strength when in a state of nature, and has never lost the qualities which are useful to the service of man. The young wild calves which are taken from their mothers in India and Africa, have, in a short time, become as tractable as those which are the issue of the tame kind; and this natural conformity is another striking proof of the identity of the species.

"If it be asked, Which of the two kinds, the Aurochs or the Bison, claims the first place? It appears to me, that a satisfactory answer may be drawn from the facts we have just laid down. The hunch or wen of the Bison is probably no other than an accidental character, which is defaced and lost in the mixture of the two kinds. The Auroch, or ox without a hunch, then, is the most powerful and predominant of the two; for, if it were the contrary, the hunch instead of disappearing, would extend and remain upon every one of this mixed breed. What confirms and proves still more the identity of the species of Bison and Aurochs, is, that the Bisons, or hunch-backed oxen, in the north of America, have so strong a smell, that they have been called *Musk Oxen* by the greatest number of travellers; and, at the same time, we find, by the accounts of observing people, that the Aurochs, or wild ox of Prussia and Livonia, has the smell of musk, like the Bison of America.

"There remain, therefore, but two species, the BUFFALO and the Ox, out of all the names placed at the head of this section; to each of which the ancient and modern naturalists have given a separate and distinct species. These two animals, although greatly resembling each other, both tame, and often living under the same roof, and fed in the same meadows, yet, when brought together, and even excited by their keepers, have ever refused to unite and couple together; their nature is more distant than that of the ass from the horse; there even appears to be a strong antipathy between them; for it is affirmed, that cows will not suckle the young Buffaloes; and the female Buffalo refuses the same kindness to the other's calves"



THE BISON.

At the period when the Europeans began to make settlements in North America, this animal was occasionally found on the Atlantic coast; but even then it appears to have been rare to the eastward of the Apalachian Mountains. Theodat, whose history of Canada was published in 1636, merely says that he was informed that bulls existed in the remote western countries. Warden mentions, that at no very distant date, herds of them existed in the western parts of Pennsylvania, and that as late as the year 1766 they were pretty numerous in Kentucky; but they have gradually retired before the white population, and are now, he says, rarely seen south of the Ohio, or on the east side of the Mississippi. They still exist, however, in vast numbers, and roam in countless herds over the prairies that are watered by the Arkansas, La Platte, Missouri, and upper branches of the Saskatchewan and Peace rivers. Great Slave Lake, in latitude 60°, was at one time the northern boundary of their range; but of late years, according to the testimony of the natives, they have taken possession of the flat limestone districts of Slave Point, on the north side of that lake, and have wandered to the vicinity of Great Marten Lake, in latitude 63° or 64°. As far as I have been able to ascertain, the limestone and sandstone formations lying between the Great Rocky Mountain ridge and the lower eastern chain of primitive rocks, are the only districts in the fur-countries that are frequented by the Bison.

In these comparatively level tracts, there is much prairie land, on which they find good grass in summer; and also, many marshes overgrown with bulrushes and *carices*, which supply them with winter food. Salt springs and lakes also abound on the confines of the limestone, and there are several well-known *salt-licks*, where Bisons are sure to be found at all seasons of the year. They do not frequent any of the districts formed of primitive rocks. Their migrations to the westward were formerly limited by the Rocky Mountain range, and they are still unknown in New Caledonia, and on the shores of the Pacific to the north of the Columbia River; but of late years they have found out a passage across the mountains near the sources of the Saskatchewan, and their numbers to the westward are said to be annually increasing. In 1806, when Lewis and Clark crossed the mountains at the head of the Missouri, Bison skins were an important article of traffic between the inhabitants on the east side, and the natives to the westward. Further to the southward, in New Mexico and California, the Bisons appear to be numerous on both sides of the Rocky Mountain chain.

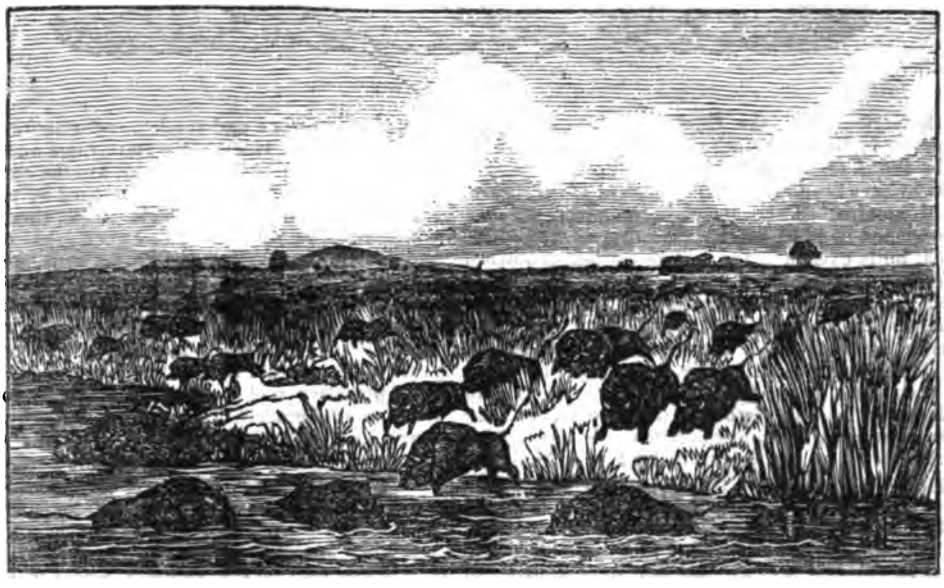
The Bison does not appear to have excited much attention in Europe until lately, when several specimens were exhibited in England, under the attractive title of *Bonassus*, which, though described by the ancients, was asserted to have been lost to the moderns, until recognised in the American animal. The American Bison has in fact much resemblance to the *Aurochs* of the Germans, identified by Cuvier with the *Bonasus* of Aristotle, the *Bison* of Pausanias and Pliny, and the *Urus* of Cæsar, and which, down to the reign of Charlemagne, was not rare in Germany, but is now nearly confined to the hilly country lying between the Caspian and Black Sea.

The Bisons wander constantly from place to place, either from being disturbed by hunters, or in quest of food. They are much attracted by the soft tender grass which springs up after a fire has spread over the prairie. In winter, they scrape away the snow with their feet, to reach the grass. The bulls and cows live in separate herds for the greater part of the year; but at all seasons, one or two bulls generally accompany a large herd of cows. The Bison is in general a shy animal, and takes to flight instantly on scenting an enemy, which the acuteness of its sense of smell enables it to do from a great distance. They are less wary when they are assembled together in numbers, and will then often blindly follow their leaders, regardless of, or trampling down the hunters posted in their way. It is dangerous for the hunter to show himself after having wounded one, for it will pursue him, and although its gait may be heavy and awkward, it will have no difficulty in overtaking the fleetest runner.

Many instances might be mentioned of the tenaciousness with which this animal pursues his revenge; and I have been told of a hunter having been detained for many hours in a tree by an old bull, which had taken his post below to watch him. When it contends with a dog, it strikes violently with its fore-feet, and in that way proves more than a match for an English bull-dog. The favourite Indian method of killing the Bison, is by riding up to the fattest of the herd on horseback, and shooting it with an arrow. When a large party of hunters are engaged in this way, the spectacle is very imposing, and the young men have many opportunities of displaying their skill and agility. The horses appear to enjoy the sport as much as their riders, and are very active in eluding the shock of the animal should it turn on its pursuer. The most generally practised plan, however, of shooting the Bison, is by crawling towards them from the leeward; and in favourable places, great numbers are taken in pounds. When the Bison runs, it leans very much first to the one side for a short space of time, and then to the other, and so on alternately.

The flesh of a Bison, in good condition, is very juicy and well flavoured, much resembling that of well-fed beef. The tongue is considered a delicacy, and may be cured so as to surpass in flavour the tongue of an English cow. The hump of flesh covering the long spinous processes of the first dorsal vertebræ is much esteemed. It is named *bos* by the Canadian voyagers, and *wig* by the Orkney men in the service of the Hudson's Bay Company. The wig has a fine grain, and when salted and cut traversely, it is almost as rich and tender as the tongue. The fine wool which clothes the Bison renders its skin, when properly dressed, an excellent blanket; and they are valued so highly, that a good one sells for three or four pounds in Canada, where they are used as wrappers by those who travel over the snow. The wool has been manufactured in England into a remarkably fine and beautiful cloth, and in the colony of Osnaboyna on the Red River, a warm and durable coarse cloth is made of it. Much of the *pemmican* used by the voyagers attached to the fur-companies, is made of Bison-meat, procured at their posts on the Red River and Saskatchewan. One Bison cow in good condition furnishes good meat and fat enough to make a bag of pemmican weighing 901 lbs. The Bisons which frequent the woody parts of the country form smaller herds than those which roam over the plains, but are said to be individually of a greater size.—*Dr. Richardson's Arctic Zoology.*

The herds of Bisons wander over the country in search of food, usually led by a bull most remarkable for strength and fierceness. While feeding, they are often scattered over a great extent of country, but when they move in mass, they form a dense and almost impenetrable column, which, once in motion, is scarcely to be impeded. Their line of march is seldom interrupted even by considerable rivers, across which they swim without fear or hesitation, nearly in the order that they traverse the plains. When flying before their pursuers, it would be in vain for the foremost to halt, or to attempt to obstruct the progress of the main body, as the throng in the rear still rushing onward, the lead-



HERD OF BISONS CROSSING A RIVER.

ers must advance, although destruction awaits the movement. The Indians take advantage of this circumstance to destroy great quantities of this favourite game; and certainly no mode could be resorted to more effectually destructive, nor could a more terrible devastation be produced, than that of forcing a numerous herd of these large animals to leap together from the brink of a dreadful precipice, upon a rocky and broken surface, a hundred feet below. The following cut represents the striking scene.

INDIAN MODE OF DESTROYING THE BISON.

When the Indians determine to destroy Bisons in this way, one of their swiftest-footed and most active young men is selected, who is disguised in a Bison-skin, having the head, ears, and horns adjusted on his own head, so as to make the deception very complete, and thus accoutred, he stations himself between the Bison herd and some of the precipices, which often extend for several miles along the river. The Indians surround the herd as nearly as possible, when, at a given signal, they show themselves, and rush forward with loud yells. The animals being alarmed, and seeing no way open but in the direction of the disguised Indian, run towards him, and he, taking to flight, dashes on to the precipice, where he suddenly secures himself in some previously ascertained crevice. The foremost of the herd arrives at the brink; there is no possibility of retreat, no chance of escape; the foremost may for an instant shrink with terror, but the crowd behind who are terrified by the approaching hunters, rush forward with increasing impetuosity, and the aggregated force hurls them successively into the gulf, where certain death awaits them.

These animals have been seen in herds of three, four, and five thousand, blackening the plain as far as the eye could view. At night, it is impossible for persons to sleep near them who are unaccustomed to their noise, which, from the incessant lowing and roaring of the bulls, is said to resemble distant thunder. Although frequent battles take place between the bulls, as among domestic cattle, the habits of the Bison are peaceful and inoffensive, seldom or never offering to attack man or other animals, unless outraged in the first instance.—*Dr. Godman.*

MYTHOLOGY.

TERMINUS.

"Another god, greatly honoured in the city of Rome, was Terminus, because they imagined that the boundaries and limits of men's estates are under his protection. His name, and the divine honours paid to him by the ancients, are mentioned by Ovid, Tibullus, and Seneca. The statue of this god was either a square stone, or a log of wood planed; which they usually perfumed with ointment, and crowned with garlands.

"And, indeed, the Lapides Terminales, that is, 'landmarks,' were esteemed sacred; so that whoever dared move, or plough up, or transfer them to another place, his head became devoted to the Diis Terminalibus, and it was lawful for any body to kill him.

"And further, though they did not sacrifice the lives of animals to those stones, because they thought that it was not lawful to stain them with blood; yet they offered wafer made of flour to them, and the first fruits of corn, and the like: and upon the last day of the year they always observed festivals to their honour, called Terminalia."

LATONA.

"Latona was the daughter of Phœbe, by Cœus the Titan. So great was her beauty, that Jupiter fell in love with her, which excited the jealousy of Juno, who caused her to be cast out of heaven to the earth. Not content with this, she obliged Terra, by an oath, not to give her a habitation; and besides, she set the serpent Python upon her, to persecute her wherever she went. Juno, however, was disappointed, for the island Delos received Latona, where, under a palm or an olive tree, she brought forth Diana, who, as soon as she was born, nursed and took care of her brother Apollo.

"Her reception at Delos, notwithstanding the oath of Terra, is thus accounted for. This island formerly floated in the sea, and they say that it was hidden under the waters when Terra took her oath, but that it emerged afterwards by the order of Neptune, and became fixed and immovable for Latona's use, from which time it was called Delos, because it was visible like other places.

"The island Delos emerged for Latona's use, because it was sister to Latona. Some say, that her name was formerly Asteria, whom Jupiter loved and courted, but she was converted into an island: others report, that she was converted into a quail (*Ovid Met.* 15,) and flew into this island, which was, therefore, among other names, called Ortygia. Niobe's pride, and the barbarity of the countrymen of Lycia, increase the fame of this goddess. The story of Niobe we have already related.

"The rustics of the country of Lycia in Asia also experienced the anger of Latona to their ruin; for when she wandered in the fields, the heat of the weather and the toil of her journey brought such a drought upon her, that she almost fainted for thirst. At last discovering a spring in the bottom of the valley, she ran to it with great joy, and fell on her knees to drink the cool waters:

To quench her thirst with the refreshing stream:

but the neighbouring clowns hindered her, and bid her depart. She earnestly begged leave, and they denied it: she did not desire, she said, to injure the stream by washing herself in it, but only to quench her thirst.

"They regarded not her entreaties, but with threats endeavoured to drive her away. This great inhumanity moved the indignation of Latona, who cursed them, and said, "May you always live in this water." Immediately they were turned into frogs, and leaped into the muddy water, where they ever lived."

HYMEN.

"The first of Venus's companions was the god Hymenæus. He presided over marriage, and was the protector of young unmarried women. He was the son of Bacchus and Venus Urania, born in Attica, where he used to rescue virgins carried away by thieves, and restore them to their parents. He was of a very fair complexion, crowned with the *amaracus* or sweet marjoram, and sometimes with roses; in the one hand he carried a torch, in the other a veil of flame colour, to represent the blushes of a virgin. Newly married women offered sacrifices to him, as they did also to the goddess Concordia."

CUPID.

Cupid was the next companion of Venus. We have already described him in No. 6 of the present volume.

"The poets speak of two Cupids. One of which is an ingenious youth, the son of Venus and Jupiter, a celestial deity; the other the son of Erebus and Nox [*Hell* and *Night*,] a vulgar god, whose companions are drunkenness, sorrow, enmity, contention, and such kind of plagues. One of these Cupids is called Eros, and the other Anteros; both of them are boys, and naked, and winged, and blind, and armed with a bow and arrows and a torch. They have two darts of different natures; a golden dart which procures love, and a leaden dart which causes hatred. Anteros is also the god who avenges slighted love."

ZEPHYR.

"Zephyr or Zephyrus was the west wind. He was represented as a beautiful youth, with butterfly's wings. He cooled the air by the fanning of his wings during the heat of summer, and revived the flowers when they fainted under the sun's rays.

"Zephyr was married to Flora, the goddess of flowers. He was represented in the octagon temple of Athens, which is called the Temple of the Winds. Zephyr loved young Hyacinth, who was also beloved by the nymph Echo, and by Apollo; but the envious Zephyr applied his strongest breath to a *discus* which Apollo was throwing, and killed Hyacinth; whereupon Apollo caused the blood of his favourite boy to produce the flower that bears his name."

LARES AND PENATES.

"The Lares and Penates were Roman gods, who presided over empires, cities, highways, houses, and individuals. Among these divinities were ranked the souls of them who had faithfully served the state; and families placed among them the spirits of their departed friends and relations. They were esteemed as the guardians of houses; were worshipped by the Romans under the figure of small images of human form, and were kept in the most retired part of the edifices. Lamps, the symbols of vigilance, were consecrated to them, and that faithful domestic animal, the dog, was sacrificed to them. When infants quitted one of their first ornaments, called the Bulla, it was deposited before the feet of these domestic deities. During the public feasts of these Lares and Penates, small waxen images of them were suspended in the streets.

"The Lares and Penates were represented as young boys covered with dog skins, and at their feet was placed the image of a dog. The dog is the emblem of faithful attachment and watchful care, and is more the the friend and guard of man than any brute animal; therefore he was a proper companion of the domestic gods.

"The Lares were placed on a hearth in the hall; and on festivals they were crowned with garlands, and sacrifices were offered to them.

"The other household gods, the Penates, were worshipped only in an interior apartment called the *Penetralia*. They were held so sacred by the Romans, that the expression of driving a man from his Penates, signified that he was expelled from his home, his country, and from all that he loved.

GENII.

"Genii were invisible spirits, regarded as the intimate companions of man's thoughts, governing and disposing his mind and his conduct. Every man was supposed to have two genii. His evil genius disposed him to wrong conduct, and led him to misery—his good genius inspired him with virtuous sentiments, and instructed him in what is excellent in action.

"They were represented as young men, holding in one hand a drinking vessel, and in the other a horn of plenty. Sometimes they were depicted under the form of serpents.

"The Genii presided over the birth and life of men. Each spot had a *local genius*—one of the place. Cities, groves, fountains, and hills, were provided with these guardians.

"It was the custom of the Romans to invoke these Genii on birth-days. The ground was strewed with flowers, and wine was offered to them in cups.

"The opinion prevailed, that the universe abounded in spirits, presiding over its various parts and movements. Plato, the Greek philosopher, speaks of Sylphs, Gnomes, and Salamanders; the first inhabiting the air, the second the earth, the third fire."

AMERICAN GYPSIES.

Dr. Alexander Jones of Mobile, Alabama, says the New York Observer, in a letter addressed to Professor Silliman of New Haven, gives the following account of a colony of American gypsies in Louisiana.

I see Professor Griscom has translated from the "Revue Encyclopedique," an article on "Gypsies," for your journal, in which he remarks that there are no "Gypsies" in America, or that "they have never appeared in America." In this, the writer is mistaken. There is a colony of gypsies on Biloxi Bay, in Louisiana, who were brought over and colonized by the French, at a very early period of the first settlement of that state. They are French gypsies, and speak the French language; they call themselves Egyptians or Gypsies. The French call them indifferently, Egyptians or Bohemians.

What is remarkable since their colonization in this country, they have lost the distinctive character of their idle and wandering habits. They are no longer strolling vagrants, but have, in the lapse of time, become in all respects like the other French settlers found in Louisiana. They appear equally polite, hospitable, and intelligent. They also possess all the industry and enjoy all the comforts of settled life that belong to the French inhabitants generally.

The only striking difference between them is seen in their complexion and the colour of their hair, which is much darker in the Gypsies than in the French population. Their hair is also coarser and straighter than that of the French.

Their intellectual vigour appears to be as great as that of any people. A young man of this colony received a collegiate education at Georgetown, D. C. and is residing in New Orleans; and there are probably few men to be found in the United States, of his age, whose knowledge and learning are more profound and varied than his. He is also a good and ready writer. The most of the foregoing facts were derived from an eminent and learned lawyer from Mobile, who speaks the French language fluently, and has travelled among, and conversed familiarly with these Gypsies.

From the National Gazette.

Kinderhook, May 19, 1834.

Mr. Editor:—I observed, in a late number of the National Gazette, an interesting article on Gypsies. The writer says "there are none in America." With a few exceptions he may be correct. I have often, during the last fifteen years, heard of, and, for the last three years, seen numbers of a gang of Gypsies, occupying a spot of waste land, about four miles northwest of Kinderhook, called de Bruyn's Patent.

They are denominated Yansers by our Dutch inhabitants; probably from their family or patriarchal name Jansen. They have the features, complexion, and habits characteristic of the Gypsies of writers. Our tribe, it is conjectured, emanated from a larger establishment of them at Schoharie, with whom they maintain an intercourse, and make inquiries after the seniors whenever opportunity presents.

There is yet another tribe at or near Schenectady, called Yansers, although their patriarchal name is Keyser. A gentleman appointed some years ago to some town office there, states that he found a charge of £4 10*s. for whipping Yansers;* the amount being small was allowed. A similar charge being brought the next year, he asked what in the name of goodness it meant? behold, it was for chastising Gypsies whenever occasion presented, which was done with impunity and some profit. I have not heard that the inhabitants of Kinderhook have ever made charges, but they certainly use similar correction on male and female, without law, (I know not if without mercy,) for supposed transgressions. They stand well with the grocers and shop-keepers, with whom they barter their wares; but not so with the prudent guardians of youth.

It is due to the inhabitants of the village to state, that seven years ago the small pox invaded the huts and caves of their settlement; the best medical aid and provisions were furnished to them the latter being delivered on a boundary line, which they were enjoined not to pass.

Although the annals of our country do not extend back to the dark ages of antiquity, yet the origin of these settlers is too remote to be accurately traced. It is supposed by the best informed of my neighbours, that they came over with the early settlers in the German Valley; that, disliking the laborious employment of their fellow-adventurers, they withdrew themselves to a separate establishment, where they might subsist themselves by their wits and lighter occupations. They are every where manufacturers of baskets, brooms, and other wooden wares.

C.

A NEW CONTINENT.

It will be recollected that a year or two ago, a paragraph was put forth by the London Literary Gazette, if we recollect right, and extensively copied, stating that a large body of land had been discovered somewhere to the southward of the Cape of Good Hope. There was however a great lack of details, for want of which, as well as the extraordinary character of the discovery, many were inclined to regard it with incredulity. We now have the long sought details.

INTERESTING TO THE WORLD AT LARGE.

From the Tasmanian of Hobart Town, dated Oct. 11, 1833.

Most of our readers will recollect that about eighteen months since, Capt. Briscoe of the brig Tula, brought his vessel to this port for repairs. It will also be fresh in the memory of many, that some of our public writers pretended to doubt the authenticity of Capt. Briscoe's statement—viz. that he was then on an expedition at the cost of a London mercantile house; indeed, in this very journal, the epithet "piratical" was more than once repeated when referring to the Tula and Lively. At the time Captain Briscoe was with us, it became pretty generally understood that a discovery of land of some importance had been made, but as great pains were taken to keep the situation a secret, the various reports circulated, of course, were only surmises of those who pretended to be more knowing than their neighbours. The following extract, however, will disclose the secret, which was so well kept by the enterprising crews of the two little vessels—

"The discovery of the land towards the South Pole, made by Capt. Briscoe, in the brig Tula accompanied by the cutter Lively, both vessels belonging to Messrs. Enderby, extensive owners of ships in the whale fishing, has been communicated to the Royal Geographical Society.

"It is supposed that this land forms part of a vast Continent, extending from about longitude 47—31 east, to longitude 69—29 west, or from the longitude of Madagascar round the whole of the Southern or South Pacific Ocean, as far as the longitude of Cape Horn. On the 28th February, 1832, Captain Briscoe discovered land, and during the following month remained in the vicinity; he clearly discovered the black peaks of mountains above the snow, but he was, from the state of the weather and the ice, unable to approach nearer than about thirty miles. The Stormy Petrel was the only bird seen, and no fish. It has been named Enderby's Land, longitude 47—31 E. latitude 66—30 S. An extent of about 300 miles was seen. The range of mountains E. S. E.

"In consequence of the bad state of health of the crew, Captain Briscoe was compelled to return into warmer latitudes. He wintered at Van Diemen's Land, and was rejoined by the cutter, from which he was separated by the stormy weather, in the high south latitudes.

"In October, 1831, he proceeded to New Zealand. In the beginning of February, 1832, he was in the immediate neighbourhood of an immense iceberg, when it fell to pieces, accompanied by a tremendous noise.

"On the 4th of the same month, land was seen to the S. E. longitude 68—29, latitude 67—15. It was found to be an island, near to the head land, of what may be hereafter called the Southern continent. On the island, about 4 miles from the shore, was a high peak (and some small ones;) about one third of its height was covered by a thin scattering of snow, and two thirds completely with snow and ice. The appearance of the peaks was peculiar; the shape was conical, but with a broad base.

"This island has been named Adelaide Island, in honour of her Majesty. Mountains were seen to the South at a great distance inland, supposed about 90 miles. On the 21st February, 1832, Captain Briscoe landed in a spacious Bay in the main land, and took possession in the name of his Majesty William IV. The appearance was one of utter desolation, there being no vestige whatever of animal or vegetable life. In future, this part of the continent, if such it prove, will be known as Graham's Land."—*Sydney Monitor.*

ISTHMUS OF PANAMA—RAIL-ROAD FROM THE ATLANTIC TO THE PACIFIC.

The New York Journal of Commerce says:—The Panamaians appear to be thoroughly impressed with the belief that the highway of commerce is very soon to pass by their doors, and that the Isthmus is very soon destined to be one of the most wealthy, populous, and influential portions of the Globe. And in truth they are not alone in this expectation.—"I venture to predict," says M. de Pradt, "that the Isthmus of Panama will in a very short time be subjected to the powerful action of Art, which will contrive means to open a direct route from Europe to the western shores of America and these of Asia bordering on the Pacific, and from the whole American coast to Europe. Then will commence a great commercial revolution, favourable to the three parts of the world, and to the new continent of the South Sea.—This result surpasses what the imagination of man can conceive. And what will have produced this result? The emancipation, i. e. to say, the civilization of America."

"Independence being once established," says the author of the Geographical, Topographical, Agricultural, Commercial, and Political Description of Colombia, "her sons will immediately open a communication with Japan, China, and India. Their coast on the Pacific side gives them great advantage over European nations. Portobello and Nicaragua will be, in the course of a few years, the emporium whither all America on the Atlantic side, and probably all Europe, will go to purchase the merchandise of the Indies. This change in that important trade, will produce as great a change in the wealth and relative power of nations, as did the discovery of the Cape of Good Hope."

Humboldt speaks of the Isthmus as a place "destined to change the face of the commercial system of nations."

The Peru *Mercurio* says, "The road project and a liberal commercial enactment, will make that beautiful country the emporium of commerce, and raise up a city more wealthy than Guanaxuato of the Mexican States, Potosi of Bolivia, Pasco of Peru, or Huasco of Chili. There is no doubt of it. Panama, situated on the Isthmus which connects the Pacific with the Atlantic, and communicates freely with all the civilized world, is going to exert a great influence upon the commeree of Asia, Europe, and the two Americas."

At present, the communication [between the Atlantic and Pacific] is attended with much difficulty; partly on account of the extreme roughness of the surface, and partly for the want of the necessary enterprise to make the best of the obstacles of nature. From the alleged discovery, within the three months past, of a comparative level route from Panama to Portobello, it it would seem that the intervening region had not even been thoroughly explored. The distance between the two places, according to the gazetteers, is thirty-seven miles; though by the course now travelled, it is a good deal more. The newly discovered route, which passes near Cruces, reduces it to about thirty-five miles. By the next arrival we may expect the report of the Commissioners appointed to explore this route. They left Panama about the 25th of March, and had not returned on the 6th of April.

ITEMS OF INTELLIGENCE.

The Pope has excommunicated Don Pedro, his Ministers, and in short all the friends of the Queen's cause.—It is stated from Lisbon, that if this excommunication be not withdrawn, the government has notified the Court of Rome, that they will consider it their duty not only to stop the annual revenue of about 40l. which Portugal pays, but to take into serious consideration the propriety of ceasing all connexion with it.

Money is so plenty in England that it has been loaned as low as 1 1-2 per cent. per annum. The current rate of interest is 2 and 2 3-4 per cent. The offer of the Bank of England to make loans at 3 per cent. produced much excitement, being considered extortionous.

Professor Olmsted of Yale College, in an article in Silliman's Journal of Science, feels himself authorized by facts in the case which he states, to draw the following conclusion:—"That the Meteors of November 13th consisted *of portions of the extreme parts of a nebulous body which revolves around the sun in an orbit interior to that of the earth, but little inclined to the plane of the ecliptic, and having a period of* 182 *days nearly.*"

The multiplying power in some instances—animal as well as vegetable—is astonishing. An annual plant of two seeds produces, in 20 years, 1,048,576; and there are plants which bear 40,000 seeds. The roe of a cod-fish is said to contain a million of eggs: mites will multiply to a thousand in a day; and there are viperous flies which produce 2,000 at once.

POETRY.

LINES

Occasioned by hearing a little boy mock the Old South Clock, as it rung the Hour of Twelve.—Mrs. Child.

Ay, ring thy shout to the merry hours:
  Well may ye part in glee;
From their sunny wings they scatter flowers,
  And, laughing, look on thee.

Thy thrilling voice has started tears:
  It brings to mind the day
When I chased butterflies and years,—
  And both flew fast away.

Then my glad thoughts were few and free;
  They came but to depart,
And did not ask where heaven could be—
  'Twas in my little heart.

I since have sought the meteor crown
  Which fame bestows on men:
How gladly would I throw it down,
  To be so gay again!

But youthful joy has gone away;
  In vain 'tis now pursued;
Such rainbow glories only stay
  Around the simply good.

I know too much to be as blessed
  As when I was like thee;
My spirit, reasoned into rest,
  Has lost its buoyancy.

Yet still I love the winged hours:
  We often part in glee—
And sometimes, too, are fragrant flowers
  Their farewell gifts to me.

MANGANESE.

A mineral which, when pure, is of a grayish white colour, and considerable brilliancy; it has neither taste nor smell, is of the hardness of iron, and very brittle; when reduced to powder it is attracted by the magnet. The ore of manganese is remarkable for its spontaneous inflammation with oil.

SECTION XII.

HISTORY.

THE ISRAELITES.

The history of this people is at once the most extraordinary and important of all others in the annals of mankind. It was the Israelites that were chosen by God to be the depository nation among whom the true religion should be preserved, while all the rest of the world were enveloped in the dark mists of superstition and idolatry. It was *in* this nation that the patriarchal line was continued; *by* them was the true history of the world preserved; and *of* them came the Founder of the glorious religion which we ourselves enjoy, and which is ultimately destined to overspread the earth. It is the history of this people that forms the principal subject of the sacred book which from our infancy we have been accustomed to revere, and with which we have been rendered familiar; on which account the Jewish character is invested in our feelings with a venerable sanctity which commands our most profound respect, and has also imparted to our own a shade of its moral hue. Believers in the God of Israel ourselves, and more conversant with their history than with that of our own country, even the mention of that people touches a sympathetic cord within us which nothing else can do. Their concerns seem as it were our own. Abraham, Isaac, and Jacob, Moses, Joshua, and David, are to us as household words; and the individuals who once bore those names seem almost present with us. They seem not even like our ancestors; they are too near for that. But they appear like near relatives, intimate friends, living and acting at the moment. Feelings like these come over us in treating of the history of this wonderful people, and impart to it an interest which no other history can possess.

We have already traced the patriarchal line from Adam down to Abraham; and the latter individual we have accompanied from the country of his nativity to the land of Canaan.

Not long after his arrival in the latter country, there occurred a famine; whereupon he went to Egypt. But Sarah his wife being a very handsome woman, he requested her to say that she was his sister, fearing that the Egyptians would kill him for her sake, if they knew she was his wife. The fame of her beauty reaching the ears of Pharaoh, king of Egypt, he took her into his own house, and treated Abraham most generously on her account. But "the Lord plagued Pharaoh and his house with great plagues, because of Sarai, Abram's wife;" upon which Pharaoh expostulated with Abraham for calling her his sister, and restored her to him.

After this, Abraham returned to the land of Canaan. He had not been long there, before he had occasion to signalize himself in a military exploit. Five of the kings of Canaan revolted against Chedorlaomer, king of Elam, (a portion of Persia,) which, as a matter of course, produced a war. Chedorlaomer, with his own forces, and those of his allies, invaded the revolted countries, and spread desolation far and wide. He was at length met by the revolted monarchs, with their armies, in the vale of Siddim, and a bloody battle ensued. Chedorlaomer gained the victory; after which he pillaged Sodom and Gomorrah, and went his way, carrying off with him into captivity Lot, Abraham's brother's son, who dwelt in Sodom. When tidings of this reached Abraham, he armed his trained servants, born in his own house; three hundred and eighteen, and pursued, overtook, and smote the victors, thereby recovering the booty, and liberating Lot. We have already given a detailed account of these events, and therefore touch briefly on them here.

After these things, God made a covenant with Abraham, in which he promised him the land of Canaan as a possession to his posterity, foretelling him, at the same time, of the Egyptian bondage.

About this time, Ishmael, the son of Abraham by Hagar, was born. He was the great ancestor of the Arabs. For a detail of the singular circumstances connected with his birth and infancy, the reader is referred to the xvi. chap. of Genesis.

When Abraham was ninety-nine years of age, the Lord appeared to him, and changed his name from that of Abram to Abraham; "for," said he, "a father of many nations have I made thee." He also changed the name of his wife, calling her Sarah instead of Sarai, promising at the same time, that she should be the mother of a son, she having had no children hitherto, and being now ninety years of age. It was at the time of this interview that God instituted the rite of circumcision in the family of Abraham, which has been continued among his descendants to this very day.

The intercession of Abraham for Sodom has already been noticed. After the destruction of that place, he journeyed south, and dwelt in Gerar. Here again he called Sarah his sister; and Abimelech, the king of Gerar, sent and took her. "But God came to Abimelech by night, and said to him, Behold, thou art but a dead man, for the woman which thou hast taken; for she is a man's wife." In the morning, Abimelech called Abraham, and remonstrated with him in relation to the course he had pursued. Abraham excused himself on the ground of his fears. "And yet indeed," said he, "she is my sister; she is the daughter of my father, but not the daughter of my mother. And she became my wife." So Abimelech restored Sarah to Abraham.

According to promise, Sarah at length became the mother of a son. Abraham gave him the name of Isaac, and when he was eight years old, he circumcised him, according to the divine institution. At length Ishmael, the son of Hagar by Abraham, feeling envious or malignant at the distinction conferred on Isaac, scoffed at it; upon which, he and his mother were turned out of doors by Sarah. The sequel we will leave till we take up the history of his descendants.

LITERATURE.

(From the Penny Cyclopædia.)

ALPHABETS.

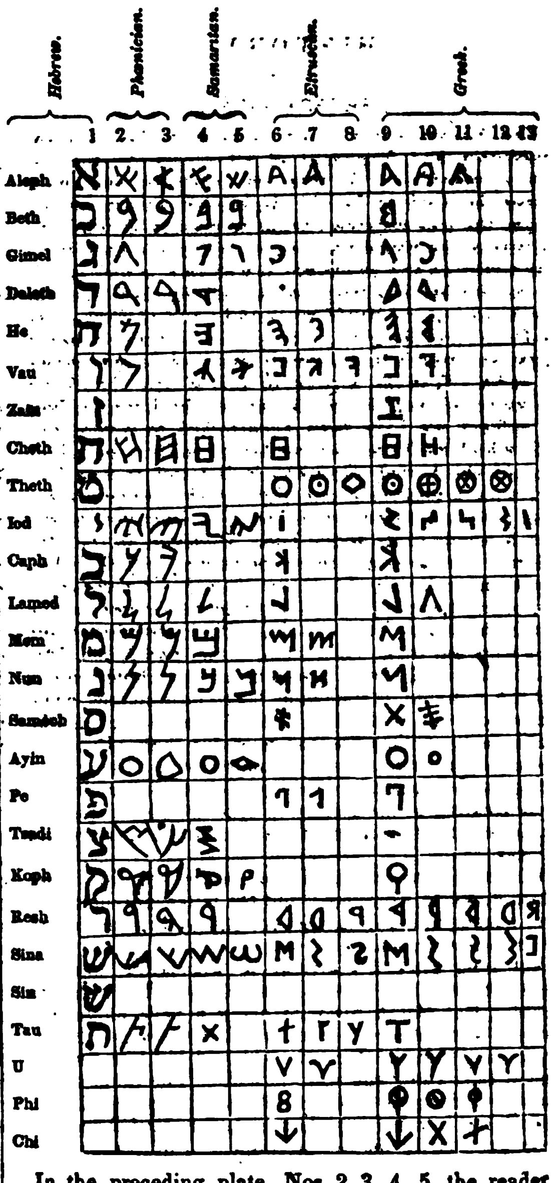
Alphabet is the name given to the series of letters used in different countries at different times. The term is borrowed from the Greek language, in which *alpha*, *beta*, are the first two letters; or if we go a step farther back, we should derive the word from the

Hebrew, which gives to the corresponding letters the names *aleph*, *beth*. Thus the formation of the word is precisely analogous to that of our familiar expression, the A, B, C.

The hieroglyphic characters of Egypt bear upon the very face of them decided proof that they are in their origin pictorial emblems; and that they constitute a language, appears incontrovertibly from the triple Rosetta inscription, the Greek version of which expressly affirms, that the decree contained in the inscription was ordered to be written in three different characters, the sacred letters, the letters of the country, and the Greek. The second of these classes has been called the *enchorial*, from the Greek term (ἐγχώριος) signifying *of the country*; or else *demotic*, (δημοτικος) i. e. *of the people*. But although the hieroglyphic characters may be for the most part pictorial emblems, used directly for the objects which they represent, or metaphorically for other associated ideas, it has been established by most satisfactory evidence, that they were also in some cases representatives of articulate sound, not, however, of the whole oral name belonging to their original object, but solely of the initial letter, or perhaps syllable. This use of the sacred pictorial characters as symbols of sound was perhaps originally confined to the expression of proper names. Such, for instance, is their use in the hieroglyphic division of the Rosetta inscription for the name of Ptolemy, and in another inscription for that of Cleopatra. Thus, the former name might be expressed hieroglyphically in our own language by the pictures of *a pig*, *a top*, *an owl*, *a lion*, and *a mouse*. It should be added, however, that when the sacred symbols are used with this phonetic or vocal power for royal names, they are included in an oval ring or cartouche. The enchorial character seems at first to bear little or no resemblance to the hieroglyphic; but a comparison of various manuscripts that have been found in mummies, containing parallel passages in the two characters, has led to the certain conclusion that the enchorial themselves have arisen from the degradation or corruption of the sacred pictorial characters. Dr. Young, in his excellent article on Egypt, in the Supplement to the *Encyclopædia Britannica*, has given specimens which are perfectly sufficient to establish the connexion. The subject, however, of Egyptian writing in its different forms requires an investigation of so many details, that we must refer our readers to HIEROGLYPHICS. We must here be satisfied by stating what appears to us to be a safe conclusion, that a language originally hieroglyphic, would naturally wear away until the characters lost nearly all trace of their original formation on the one hand, and became, eventually, the mere representatives of phonetic powers, first, perhaps, as syllables, afterwards as mere letters.

The Hebrew alphabet again affords double evidence of the same nature. The names of the letters, it is well known, are also the names of material objects, some of the very objects, in fact, which would be well adapted to pictorial representation. A part of these names, it is true, are obsolete in the Hebrew language as at present known, that is the authority for their meaning is solely traditional, as they are not found in the existing writings of the language; but this fact, while it affords evidence that the names are not the result of forgery, is precisely what must necessarily have occurred in those changes to which all language is exposed in the long course of ages. We subjoin a table with the Hebrew names of the letters, which it will be seen have been borrowed, with slight changes, for many other alphabets. But it will be objected, that, in fact, the letters, whatever they may be called, bear no pictorial resemblance to the objects which it is pretended they represent. If the Hebrew characters alone be considered, this objection will not be unreasonable. But there is strong reason for believing that the present Hebrew characters are of comparatively modern date, and if so, there is nothing very violent in the supposition that they may have been derived by degradation from an earlier pictorial form, as the enchorial of the Egyptians, it is now established, arose from the corruption of their hieroglyphics. But not to rely too strongly upon theory, we may appeal to what are virtually Hebrew alphabets, though called Phœnician and Samaritan.

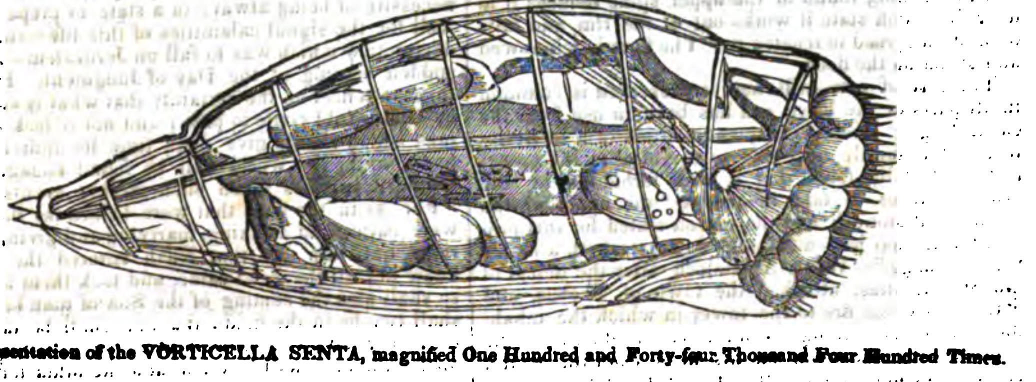
Alphabets from right to left.


Hebrew.
Phœnician.
Samaritan.
Etruscan.
Greek.
1
2
3
4
5
6
7
8
9
10
11
12
13
Aleph
Beth
Gimel
Daleth
He
Vau
Zain
Cheth
Theth
Iod
Caph
Lamed
Mem
Nun
Samech
Ayin
Pe
Tsadi
Koph
Resh
Sina
Sin
Tau
U
Phi
Chi

In the preceding plate, Nos. 2, 3, 4, 5, the reader will see specimens of these alphabets. The first two are taken from Boeckh's *Inscriptions*, pp. 523, 527, and from the coins given by Mionnet. The Samaritan characters are taken solely from Mionnet. Now among these, we find a few at least which, even to the sober minded, bear considerable resemblance to the natural objects. The first letter in these alphabets, *aleph*, it is well known means *an ox*; indeed, the terms ἐλέφας, *elephas*, *elephant*, of the Greek, Latin, and English languages, seem to be derived from this Hebrew name. If in Syria the name *aleph* was extended to the *elephant*, just as the Greeks applied their term *crocodile*, properly a *lizard* to the monster of the Nile—when the word came to the western nations in connexion with the *elephant*, the original sense would be readily lost in the secondary. The Romans too called the same animal *Bos Lucas*, the *Lucanian Ox*. The most simple mode of representing an ox would be by a picture of its head and horns; and if any one will turn the engraving of our second Phœnician character so as to have the angular point downwards, he will see a very fair picture of an ox's head, with its two horns, and ears into the bargain. Those who are determined to take nothing for the representative of an ox that has not a body, four legs, and a tail, may be asked to account for the astronomical figure of *taurus* in the zodiac.

Again, the Hebrew name for the letter *m* was *mem*, and this also was the name for water. Now a very ordinary symbol for water is a zigzag line, which is no doubt intended to imitate undulation or rippling. We find this symbol for *aquarius* in the zodiac, and we find it also in Greek manuscripts, both for θάλασσα the sea, and ὕδωρ water, the former word having the symbol inclosed in a large circle or *theta*, the latter having its aspirate duly placed above the waving line. Indeed, every boy in his first attempt to draw water, represents it by a zigzag line. But before we point out in the written characters what we look upon as representing the wave, or (to be candid) as being the corrupted remains of what once was a wave, we must premise a few words on the characters of the older Western languages. We have already asserted our belief, that the Hebrew characters now used are of more recent form than those in the Phœnician and Samaritan alphabets—we will now go one step farther, and express our opinion, that in many of the characters, the Greek alphabet and the Etruscan (which, notwithstanding its independent name, is a mere offset from the Greek) generally present a more accurate picture of the original letters than those of the three former alphabets. That all these alphabets are identical in their origin, we will presently show more in detail. It is enough here to rely upon the evidence of Herodotus, (v. 58) who expressly affirms (and he speaks from his personal examination) that the Ionians received their characters from the Phœnicians, and that they were actually called Phœnician. Now, there is no doubt that the inscriptions from which we have taken the Greek characters of our plate, are older, at least, than either the Phœnician inscriptions given in Boeckh, or the coins which furnished Mionnet with his characters. Hence, we may naturally expect to find at times in the oldest Greek characters traces of a higher antiquity and purer forms than in those which pass under the more venerable names of Hebrew, Phœnician, and Samaritan. The mere wave, then, we contend, was probably the original form of the *mem:* the initial or concluding stroke of the wave becoming, by a kind of flourish, longer than the others, leads to the so called Etruscan and Greek forms in columns 6, 9, &c. This long descending stroke takes a bend in the Samaritan and Hebrew characters towards the left; as was not unnatural in a language where the words run in that direction. By a comparison of the *gimel*, *nun*, *ayin*, and *pe*, and perhaps *caph*, with the corresponding letters in the other alphabets, the reader will perhaps be induced to ascribe the bottom strokes, which in these letters also run to the left, to the same accidental origin. This supposition is strongly confirmed by the fact, that the *caph*, *nun*, *pe*, and *tsadi*, when they are the final letters of a word, omit this appendage, and in its place have the perpendicular stroke merely continued in the same direction downwards, a little beyond its usual length. Our last example shall be from *ayin*, which is at once the name of a letter and the word which signifies an *eye*. The eye happens moreover to be an hieroglyphic character of the Egyptians, and, therefore, we cannot be surprised to find it among the Hebrew symbols. Nay, if we may believe Champollion, the picture of an *eye* in the Egyptian hieroglyphics was actually used at times for an *o*, exactly as *ayin* by the Hebrews. Now, though an eye might be represented at first with tolerable precision, it would, in the inevitable course of degradation, soon become a mere oval, or rather circle (for the eyes of animals are generally circular) with a small dot in the centre to mark the pupil. Such a character is actually found in the Greek series of alphabets. The form afterwards lost its inserted point, and at times was corrupted into a lozenge or even a triangle. In Dr. Young's successive plates of parallel passages from Egyptian MSS. (*Encycl. Brit. Supp.* Pl. 78. N.) the reader may see an emblem, consisting of a circle with a point in it, gradually wearing down in MSS. less and less carefully written, until it becomes at first a mere circle, and then something more like a triangle. After what has been said, we need hardly repeat that the Hebrew form appears again in a very corrupted state. A tail has been added, upon the principle explained above, and the careless writer has failed to make his circle meet at the top, an accident which may be also traced in the Hebrew *theth*. Indeed, the letters *ayin* and *theth* may be compared in nearly all their forms. Those who examine the changes of letters, will not be surprised that what was at first an accident, became at last a fixed rule in the formation.

WONDERS OF SCIENCE.

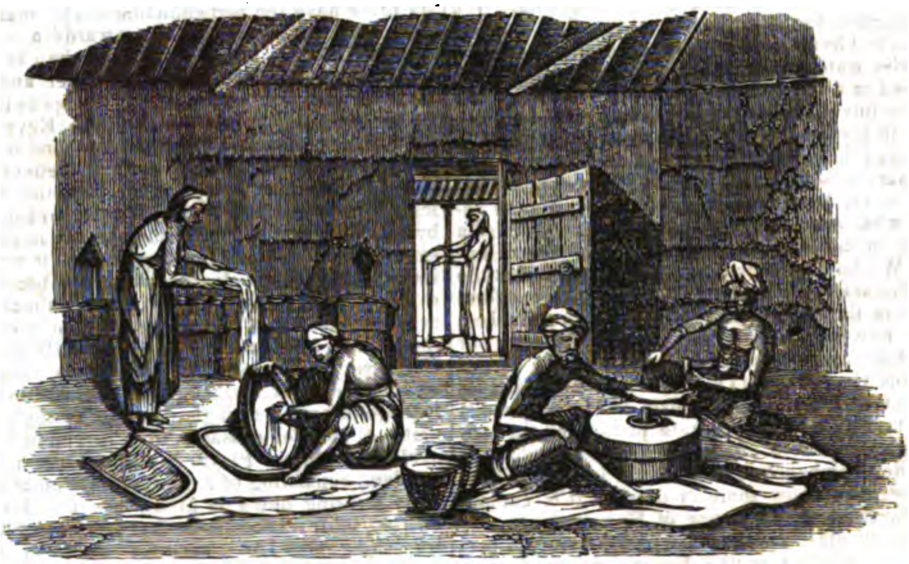


A representation of the VORTICELLA SENTA, magnified One Hundred and Forty-four Thousand Four Hundred Times.

In No. 4 of our first Vol. we gave a microscopic view of a drop of water, exhibiting it as peopled with various species of animalculæ. The preceding cut is a representation of one of these minute creatures, immensely magnified by a microscope. The following is a description, as contained in that No. of the Magazine, which we repeat here in connexion with the cut.

A very perfect animal is discovered by the microscope in rain water, which has stood for some days in leaden gutters, or hollows on the tops of houses. This is called the vorticella, or wheel-animal. Its most remarkable distinction is the apparatus from which it derives its name, and which from all its descriptions, would appear strongly to resemble the paddles of a steam-boat. They change their shape considerably in different views, but it seems pretty evident that they are circular wheels, which perform entire revolutions, and are provided with cogs similar to those on the balance-wheel of a watch. All the actions of this creature, says an observer, indicate sagacity and quickness of sensation. At the least touch or motion in the water, they instantly draw in their wheels; and it is conjectured that the eyes of this creature are placed somewhere about this apparatus, as while in the maggot state its motions are slow and blundering, but after the wheels are protruded, they are performed with great regularity, swiftness and steadiness. It is by these rotary organs, also, that they are supposed to breathe.

Some very important discoveries have lately been made by Ehrenberg in his observations on these singular beings. By feeding infusoria with very pure coloured substances, as indigo and carmine, he has ascertained the existence of mouths, stomachs, and intestines, and many interesting particulars relating to their structure and functions.



EASTERN HAND-MILLS FOR GRINDING CORN.

It is the custom in the East for families to grind the corn and prepare the flour which they use at home. The accompanying plate represents a Hindoo family engaged in this employment. The woman on the outside is cleansing the corn by pouring it on the floor against the wind, which carries away the dust and light particles that have become mixed with it. The corn thus cleaned is poured, a few handfuls at a time, into the hollow at the top of the hand-mill, which consists of two stones, about two feet and a half in diameter, and six inches thick. A stout wooden pivot connects the upper with the lower stone. The corn that is poured in at the top falls in between the two stones, and the turning round of the upper stone reduces it to flour, in which state it works out at the rim, and falls on a cloth spread to receive it. The flour is winnowed and sifted on the floor.

The sort of corn-mill here represented is common in all parts of the East, and has been in use from the earliest ages. We find frequent mention of it in Scripture. The family mill was so essential to the preparation of daily food, that it was forbidden by the law of Moses to take in pledge "the upper or the nether mill-stone;" and the reason stated for this prohibition is, that he who should do so, "taketh a man's life to pledge."—When Abimelech, after the defeat of the Shechemites, attacked the town of Thebez, and was about to set fire to the tower in which the inhabitants had taken refuge, a brave woman destroyed the oppressor by throwing on his head from the wall a stone of the household mill. The fall and degradation of Babylon is thus foretold in the beautiful imagery of the inspired prophet Isaiah: "Come down and sit in the dust, O virgin daughter of Babylon—sit on the ground. There is no throne, O daughter of the Chaldeans; for thou shalt no more be called tender and delicate; *take the mill stones and grind meal.*"

The occupation of grinding the corn is generally performed by women, though it is not unfrequently committed to men, as will be seen by our print, which is copied from a drawing made on the spot, and published as one of a series of engravings by an ingenious native artist at Madras.

There is a remarkable passage in St. Matthew, where our Saviour is pressing upon his disciples the necessity of being always in a state of preparation, as well for the signal calamities of this life—such as the destruction which was to fall on Jerusalem—as for the sudden coming of the Day of Judgment. He warns them to reflect on the certainty that what is announced by God would come to pass; and not to look for warnings which should give them time for individual preparation, for the world will be found engaged in its ordinary pursuits when such mighty events occur—"For, as in the days that were before the flood, they were eating and drinking, marrying and giving in marriage, until the day that Noah entered the ark, and knew not till the flood came, and took them all away; so shall also the coming of the Son of man be. Then shall two be in the field; the one shall be taken and the other left; *two women shall be grinding at the mill*,—the one shall be taken and the other left."

It is very remarkable that mills of a similar construction are mentioned by Pennant as in use in the highlands of Scotland and in the Hebrides, and are called Querns. The description of their form, and the manner of using them, differ in no material point from what we have shown to be customary in the East. The introduction of a more expeditious and effectual machine, seems to have been opposed by the prejudices of the people for a long time, and Pennant saw the hand-mill in use in the Isle of Rum in 1769.

" The Quern of Bra," he says, " is made in some of the neighbouring counties on the mainland, and costs about fourteen shillings. This method of grinding is very tedious, for it employs two pair of hands four hours to grind only a single bushel of corn. Instead of a hair-sieve to sift the meal, the inhabitants have here an ingenious substitute—a sheep-skin stretched round a hoop and bored with small holes made with a hot iron."

During the work the women used to sing songs, sometimes of love, sometimes of praise to their ancient heroes, whose deeds they rehearsed to slow and melancholy tunes. But Pennant observes that " singing at the Quern was almost out of date since the introduction of water-mills. The laird can oblige his tenants, as in England, to make use of this more expeditious kind of grinding, and empowers his miller to search out and break any Querns he can find, as machines that defraud him of the toll.

Lond. Sat. Magazine.

NATURAL HISTORY.

THE BUFFALO.

"The Buffalo is of a more obstinate nature, and less tractable than the Ox; he obeys with great reluctance, and his temper is more coarse, and brutal; like the hog he is one of the filthiest of the tame animals, as he shows by his unwillingness to be cleaned and dressed; his figure is very clumsy, and forbidding; his looks stupidly wild; he carries his tail in an ignoble manner, and his head in a very bad posture, almost always inclined toward the ground; his voice is a hideous bellowing, with a tone much stronger and more hoarse than that of the bull; his legs are thin, his tail bare, and his physiognomy dark, like his hair and skin. He differs externally from the ox, chiefly in the colour of his hide; and this is easily perceived under the hair, with which he is but sparingly furnished; his body is likewise thicker and shorter than that of the ox; his legs are longer, and proportionably much less; the horns not so round, black, and partly compressed, with a tuft of hair frizzled over his forehead; his hide is likewise harder and thicker than that of the ox; his flesh is black and hard, and not only disagreeable to the taste but to the smell; the milk of the female is not so good as that of the cow: nevertheless, she yields a greater quantity. In hot countries, almost all the cheese is made of Buffaloes' milk. The flesh of the young Buffaloes, though killed during the suckling time, is not good. The hide alone is of more value than all the rest of the beast, whose tongue is the only part that is fit to eat. This hide is firm, light, and almost impenetrable. As these animals, in general, are larger and stronger than the oxen, they are very serviceable in the plough; they draw well, but do not carry burdens; they are led by the means of a ring passed through their nose. Two Buffaloes harnessed, or rather chained, to a wagon, will draw as much as four strong horses. As they carry their tails and their heads naturally downwards, they employ the whole force of their body in drawing; and this heavy mass greatly surpasses that of a horse or labouring ox.

" The form and thickness of the Buffalo alone are sufficient to indicate that he is a native of the hottest countries. The largest quadrupeds belong to the torrid zone in the Old Continent; and the Buffalo, for his size and thickness, ought to be classed with the elephant, the rhinoceros, and the hippopotamus. The camel is more elevated, but slenderer, and is also an inhabitant of the southern countries of Africa and Asia: nevertheless, the Buffaloes live and multiply in Italy, in France, and in other temperate provinces. The female has but one at a time, and goes about twelve months; which is another proof of the difference between this species and that of the cow, which only goes nine months. It appears also that these animals are gentler and less brutal in their native country; and the hotter the climate is, the more tractable is their nature. In Egypt they are more so than in Italy; and in India they are more so than in Egypt. Those of Italy have also more hair than those of Egypt, and those of Egypt more than those of India. Their coat is never entirely covered, because they are natives of hot countries; and in general, large animals of this climate have either no hair, or else very little.

"There are a great number of wild Buffaloes in the countries of Africa and India, which are watered with many rivers, and furnished with large meadows. These wild Buffaloes go in droves, and make great havoc in cultivated lands; but they never attack the human species, and will not run at them, unless they are wounded, when they are very dangerous; for they make directly at their enemy, throw him down, and trample him to death under their feet; nevertheless, they are greatly terrified at the sight of fire, and are displeased at a red colour.

"The Buffalo, like all other animals of southern climates, is fond of bathing, and even of remaining in the water; he swims very well, and boldly traverses the most rapid floods. As his legs are longer than those of the ox, he runs also quicker upon land. The negroes in Guinea, and the Indians in Malabar, where the wild Buffaloes are very numerous, often hunt them. They neither pursue them nor attack them openly, but, climbing up the trees, or hiding themselves in the woods, they wait for them and kill them, the Buffaloes not being able without much trouble to penetrate these forests on account of the thickness of their bodies, and the impediment of their horns, which are apt to entangle in the branches of the trees. These people are fond of the flesh of the Buffalo, and gain great profit by vending their hides and their horns, which are harder and better than those of the ox. The animal that is called in Congo *empacapa*, or *pacapa*, though very ill described by travellers, seems to me to be the Buffalo; as that which they have spoken of, under the name of *empabunga*, or *impaiunca*, in the same country, may possibly be the bubalus."

MYTHOLOGY.

PSYCHE.

One of the most charming fictions which antiquity has transmitted to us, is that of Cupid and Psyche. It involves the most sublime and the most tender ideas of life, death, and immortality, as far as such ideas may be expected among the religious heathen of ancient times. The name of Psyche signifies both a butterfly and the human soul. When represented, therefore, with the wings of a butterfly attached to her shoulders, Psyche is, as it were, the emblem of a tender, spiritual being, who, freed from the coarser covering of her chrysalis, and too sublimated for this lower world, rises to a higher existence, where, united in sacred and mutual marriage with Love, she participates in that bliss which the immortals themselves enjoy. This fiction forms the veil which, in a most agreeable manner, conceals the terrors of the lower world.

Psyche, the most lovely of mortals, was the daughter of a powerful monarch, and the youngest of three sisters. So transcendent was her beauty, that no mortal man dared sue for her hand: and her father's subjects, neglecting the worship of Venus, raised altars to Psyche. Her parents exulted in the general homage paid to their daughter; and her sisters, somewhat jealous of her superior beauty, pleased themselves with the thought, that, while they were married, she would never have a husband. Both parents and sisters, however, soon found themselves disappointed in the anticipations which they had indulged. The former were obliged, by the command of an oracle, to conduct their darling daughter, arrayed in festive attire, as if to her burial, to the summit of a steep mountain, and there to abandon her to her fate. No sooner did Psyche find herself alone, than she was tenderly raised by a Zephyr, that carried her to the abode which had been prepared for her by Love. She saw herself transported to a region unknown to her, but the most charming which her eye had ever beheld. A magnificent palace, surrounded by beautiful groves and beds of flowers, was at her disposal; she was mistress of many invisible attendants; and her commands were no sooner issued than they were instantly executed. Him who had bestowed on her this delightful abode, and whom she was to consider as her husband, her eyes did not behold. He visited her only at night, telling her, with a sweetly sounding voice, that he was the husband allotted to her by the immortals, but entreating and warning her, at the same time, never to inquire who he was, otherwise she would lose his love for ever, and become miserable.

But in the midst of a heavenly happiness, Psyche longed to see once more her parents, or at least her sisters, that she might dissipate the grief of her family on account of her fate. Her husband, seeing that all the entreaties and remonstrances with which he endeavoured to banish this wish from the heart of his spouse were vain, consented at last to her sisters' visiting her. Zephyr was accordingly ordered to convey them to Phyche's abode. No sooner had they arrived, and beheld the happiness which had been allotted to their sister, than envy swallowed every better feeling of their hearts; and after having heard the particular circumstances under which Psyche enjoyed her matrimonial happiness, they infused into her the suspicion, that her husband must be a hideous monster, because he dreaded to be seen. Their malevolence even went so far as to persuade their sister by every possible art to transgress the positive command of her husband, and, by a pointed iron, to rid herself of the monster, when buried in sleep. The sisters were carried away again by Zephyr, and poor Psyche, whose mind was agitated by contending feelings, resolved at last to follow the counsel which her malevolent sisters had given her. When night had expanded its wings over her blessed abode, and her husband was buried in repose, she took up the lamp, and a dagger which she had concealed, and stepped with fainting knees and trembling hand to the couch of the unknown. But instead of the monster whom she had expected to see, she beheld the most beautiful of the immortals, Cupid, the god of Love! She attempted gently to draw away the lamp, but her hand trembled, and a drop of hot oil fell upon the god's shoulder. Cupid started up from his sleep, and, beholding his wife with lamp and dagger, cast a look on the wretched Psyche, in which rage, and scorn, and pity were intermingled: he mounted on his wings, never more to return.

When Psyche felt that she had lost the love and esteem of her adored husband, despair took possession of her mind, and she attempted to put a period to her existence. She threw herself into a neighbouring stream, but the floods gently carried her to the opposite bank, where Pan endeavoured to console her, by predicting to her that she was destined, at a future period, to be once more happy.

Psyche's sisters, who had anticipated the consequences of their fatal counsel, and who now wished to succeed their unfortunate sister, placed themselves, one after the other, on the summit of the mountain from which Psyche had been carried away by unknown powers, hoping that Zephyr would convey them to the wished for residence; but being hurled into the abyss by sudden blasts of wind, they atoned with their deaths for the envy and treachery which they had displayed against their innocent sister.

Poor Psyche overran the whole earth in search of her lost husband; but finding all her endeavours vain, she at last took the resolution of applying to Venus, and of imploring mercy from her. Venus, who was incensed at the fair supplicant, on account of her intercourse with Cupid, as well as because of her celestial beauty, received her with reproaches, and imposed on her the severest trials, enjoining tasks, the performance of which appeared impossible. Psyche, however, assisted by beneficent beings, whom Cupid, who still loved her, sent to her aid, surmounted all difficulties; yet was she obliged for a long time to suffer the consequences of her imprudence, until she was again thought worthy of her forfeited happiness. At last she was ordered by Venus to descend into Orcus itself, and to fetch from Proserpina a box containing the highest charms of beauty. Psyche obeyed the command of the cruel goddess. She set out on the dreadful journey, despairing herself of success; but the voice of him who was invisibly her protector and guide, taught her every precaution that was necessary to be taken, and warned her of every danger to be avoided.

Being provided with some cake to tame the fury of Cerberus, and a sum of money to gain the good will of Charon, she ventured down to the gloomy regions, and arrived safely at the palace of Proserpina. The desired box was delivered to her, but with a strict injunction not to open it. Psyche, who had surmounted so many difficulties, and sustained with heroic fortitude so many trials, suffered herself to be overpowered by this last. Scarcely had she left the dominions of Pluto, when curiosity and vanity induced her to open the box. That moment was she involved in a black and noxious vapour, which threw her into a sleep, from which she would never have again risen, had not Cupid, her invisible protector, hastened to her assistance. He restored her to life, collected the vapour again into the box, and conducted his beloved Psyche safely to the throne of Jove, there proclaiming her as his lawful wife, and supplicating for her admission among the number of the immortals. Jupiter complied with his request; Venus became reconciled to her beauteous daughter-in-law; and the whole choir of the celestials celebrated the second, the heavenly marriage of Cupid and Psyche.—*Moritz's Mythology.*

EXPEDITION TO THE NIGER.

Fresh advices have been received from the indefatigable Lander. He had returned to the coast the second time, for the purpose of procuring goods for the markets on the river. He had ascended the Niger into the interior of Africa, and had been up the Tshadda, a branch of the Niger, 150 miles. Mr. Laird who accompanied the expedition, has arrived in London. He relates that they found a city called Nunda, on the Tshadda, which contains 60 or 70,000 inhabitants. The walls are 20 feet high—The King is a brutal savage. He has in his Seraglio 1,500 women. He detained the English, and would not let them return, pretending to be influenced by the Gods. He said the Gods had been frequently consulted, but they would not give a favourable answer. Laird took advantage of the king's superstition; told him he would send a messenger to the gods, and if it burned blue, it would be an indication of a favourable reply.

Laird sent up a blue taper, which made such an impression on the king that he gave the party freedom.—The slave trade is carried on up and down the Niger. During the time Mr. Laird was up the river, about one thousand of the inhabitants of Nunda made an incursion on the bank of the Niger, and sacked the country far and wide. The object was slaves and booty. They make pipes so long that they can smoke when riding, with the bowl of the pipe resting on the foot. They are ignorant of distilling, and have not yet acquired a taste for rum;—At one spot on the Niger, the priests sacrificed a human victim, and threw the body in pieces into the river to prevent the English from going up: the ignorant natives thought this would put a stop to their progress, and were much disappointed when they found the incantation of the priests of no avail.

THE JEWS IN JERUSALEM.

Many of the Jews are in rich and comfortable circumstances, and possess considerable property in Jerusalem; but they are careful to conceal their wealth, and even their comfort, from the jealous eye of their rulers, lest they awaken their cupidity. In going to visit a respectable Jew in the holy city, it is a common thing to pass to his house over a raised foreground, and up an awkward outer stair, constructed with rough, unpolished stones, that totter under the foot; but it improves as you ascend, and at the top has a respectable appearance, as it ends in an agreeable platform in front of the house. On entering the house itself, it is found to be clean and well furnished; the sofas are covered with Persian carpets, and the residents seem happy to receive you; the visitor is entertained with coffee and tobacco, as is the custom in the houses of Turks and Christians. The ladies present themselves with ease and address, recalling to memory the pleasing society of Europe. The difference of manner arises from many of the Jewesses having resided in Spain or Portugal, where they have rid themselves of the cruel fetters of the east, and, on returning to their beloved land, very properly maintain their justly acquired freedom and rank in society. Some of the Jews, however, are in a wretched state of poverty, and the sight of such in Jerusalem is peculiarly affecting. The heart of this wonderful people, in whatever clime they roam, still turns to it as the city of their promised rest; they mourn over the ruins and would lick the very dust for her sake. Jerusalem is the centre around which the exiled sons of Judah build, in airy dreams, the mansions of their future greatness. In whatever part of the world he may live, the heart's desire of a Jew, when gathered to his fathers, is to be buried in Jerusalem. Thither they turn from Spain and Portugal, from Egypt and Barbary, and other countries among which they have been scattered; and when, after all their longings and all their struggles up the steps of life, we see them poor, and blind, and naked, in the streets of their once happy Zion, he must have a cold heart indeed that can remain untouched by their sufferings, or without uttering a prayer that the light of God's reconciled countenance would shine on the darkness of Judah, and the day-star of Bethlehem arise in their hearts.—*Keleth.*

GENIUS.

Genius receives assistance from all the intellectual powers: but it is, however, to be carefully distinguished from them. We often meet with works of real genius, abounding with errors; the defect then is not in genius, but in the assisting powers. Taste has been called *passive genius.* It is necessary to direct the wild sallies of imagination, and to regulate the course of the inventive mind. Taste is more generally bestowed on mankind than genius, and is dependent on cultivation and rules. Genius though always incorrect without study and investigation, still overcomes every difficulty, and penetrates through the thickest and most hidden recesses. It stoops not to the smaller niceties of taste, but, heedless of them, pours along its irresistible course. An excellent taste may exist with little invention; but invention is the distinguishing mark of genius. Taste is improved by comparison of the different grades of sublimity and beauty. Genius disdaining any imitation, strikes out a path for itself, wild and hazardous, where foot has never trodden. The greatest incorrectness is frequently connected with genius; numerous errors spring up in the most fruitful mind. The rich soil which gave birth to the oak, who waves his head in the tempest also produces weeds and sickly flowers. The slightest impulse is at times sufficient to rouse the full strength of genius; a spark communicated excites the most terrible explosion. The greatest river proceeds from the smallest fountain, and rolls his billows with the voice of the ocean.

PERIODICAL AUTHORSHIP.

There is no labour more destructive to health than that of periodical literature, and in no species of mental application, or even of manual employment, is the wear and tear of body so early and so severely felt. The readers of those light articles which appear to cost so little labour in the various publications of the day, are little aware how many constitutions are broken down in the service of their literary taste.

Dr. Johnson.

ORIGIN OF THE WORD DOLLAR.

The derivation suggested for this word in Todd's edition of Johnson, is confirmed by the particular explanations of later lexicographers. In 1516, a silver mine was discovered at Joachim's thal, (St. Joachim's Dame,) in Bohemia; and the proprietors in the following year issued a great number of silver pieces, of about the value of the Spanish pesoduro, which bore the name of Joachim's thaler, subsequently abbreviated into thaler. Thus the dollar, like the guinea, commemorates the locality of the metal from which it was originally coined.—*Conversations Lexicon.*

THE SIMOOM.

The best authenticated account of this wind is to be found in the writings of Bruce and Burckhardt. Bruce's account is as follows. "At 11 o'clock, while we were contemplating the rugged tops of Chigre, where we expected to solace ourselves with plenty of good water, Idris called out with a loud voice, 'Fall on your faces, for here is the Simoom.' I saw from the south-east a haze come, in colour like the purple part of the rainbow, but not so compressed, or thick. It did not occupy 20 yards in breadth, and was about 12 feet high from the ground. It was a kind of blush upon the air, and it moved very rapidly, for I scarcely could turn to fall upon the ground, with my head to the northward, when I felt the heat of the current plainly upon my face. We all lay flat opon the ground, till Idris told us it had passed over. The meteor, or purple haze which I saw, indeed passed; but a light air which still blew was of heat sufficient to threaten suffocation. For my part, I found distinctly on my breast, that I had imbibed a part of it, nor was I freed of an asthmatic sensation till I had been some months in Italy."

TEMPERANCE IN THE ARMY.

A letter to a gentleman in this city, from an officer in the U. S. army, dated Prairie du Chien, March 4th, says:

"Our regiment has improved very much of late, owing to a reform we have made among the soldiers, by introducing a Temperance Society. Its effects are remarkable. Before this, they were very intemperate; but now we seldom see a drunken soldier. Most of the officers and soldiers have put down their names to a constitution, excluding every thing stronger than wine. My own name is down, although I drank nothing. I put it down for example. The sutler is not even allowed to sell wine."

There is certainly a visible change in the deportment of people generally, caused by the Temperance Society, and those who support this society deserve every man's sincere praise for their exertions.—*N. Y. Observer.*

ITEMS OF INTELLIGENCE.

The great friend of universal freedom, Lafayette, departed this life at Paris, on the 20th of May, in the 81st year of his age.

The maritime city of Chien Chow in China, has nearly been swept away by a sudden burst of water through a ravine. Upwards of 18,000 houses were destroyed, together with a number of the inhabitants, who were drowned.

It was recently stated publicly, that there are in London more than half a million of people not in the habit of visiting any place of public worship. In Paris it is still worse—not more than 60,000, out of a population of 7 or 800,000, pretend to have any regard for the Sabbath, or the Christian religion.

Imprisonment is now generally substituted for whipping in the English army.

Hon. Wm. Badger has been elected Governor of New-Hampshire by 28,542 votes, out of 30,173.

The number of children in the various public schools of the city of New York, is 11,265. The number of teachers is 49, assistant teachers 28, monitors 75, the aggregate of whose salaries for a year amounts to $35,650.

POETRY.

From the North American Magazine.

HOPE.

Like the foam on the billow
As it heaves o'er the deep,
Like a tear on the pillow
When we sigh in our sleep,
Like the syren that sings,
We cannot tell where,
Is the hope that hath wings,
The phantom of air!

Like the star-light of gladness
When it gleams in death's eye,
Or the meteor of madness
In the spirits' dark sky;
Like the zephyrs that perish
With the breath of their birth,
Are the hopes that we cherish—
Poor bondmen of earth!

The pleasures and pains
That pass o'er us below,
Fade like colours and stains
On the cold winter's snow;
All the loves of the bosom
That burns with delight,
Are mildewed in blossom,
And withered with blight.

The sunbeam of feeling
Lights the ruins of love,
And sorrow is stealing
O'er the vision above;
Like a spirit unblest,
Hope wanders alone,
With a heart ne'er at rest
In the future or gone.

She drinks from times cup
The bright nectar of heaven,
And her spirit mounts up
'Mid the glories of even,
But the world drugs with death
The chalice of bliss,
As the nightingale's breath
Wafts the rattlesnake's hiss.

From the bowers of repose
Like a spectre she starts,
And she breathes the spring's rose
O'er the depths of all hearts;
But fancy and feeling
Must vanish in sorrow,
Struck hearts have no healing—
Hope sighs o'er to-morrow.

SECTION XIII.

HISTORY.

THE ISRAELITES.

ON the death of Sarah, Abraham took another wife by the name of Keturah, by whom he had the following sons: Jokshan, Medan, Midian, Ishbak and Shuah. Abraham, however, made Isaac his heir. "But unto the sons of the concubines which Abraham had, Abraham gave gifts, and sent them away from Isaac his son (while he yet lived) eastward, unto the east country."

Abraham died at the age of 175. His son Isaac succeeded him in the patriarchal line, and also in his estate. He had twin sons by his wife Rebecca, named Esau and Jacob. At length a famine occurring, he went to Gerar, where he followed the example of his father in calling his wife his sister, through fear of being killed for her sake, inasmuch as she was very beautiful.

When Isaac was old, he proposed to his son Esau to go out and hunt for him some venison, and receive his blessing. Rebecca, who was partial to Jacob, determined to obtain the blessing for him, instead of Esau, and therefore resorted to stratagem, which proved successful. (See Gen. xxvii.) Esau was so incensed at this that he threatened his brother's life, whereupon his parents sent Jacob to Padan-aram, among his kindred. On his way, he was favoured by a vision, in which he was assured of the high destiny that awaited him in his posterity. Arrived at the house of his uncle Laban, he became enamoured of his daughter Rachel on account of her beauty, and proposed to serve his uncle seven years, that he might have her for his wife, to which proposition his uncle agreed. But when the time arrived that he should have had Rachel, his uncle palmed off Leah, another daughter upon him. Jacob had therefore to serve seven years more to obtain Rachel.

In due time, Jacob became the father of a large family, and by adroit management, came into possession of no small amount of property. But wishing to return to his own country, and apprehending that his father-in-law might object to it, he took his family and effects and departed privately by night. Laban pursued him; but being warned by God in a dream not to maltreat Jacob, his deportment on overtaking him was very different from what it would otherwise have been. He merely expostulated with him on the *manner* of his departure; and after an interview with his family, and the formation of a covenant with Jacob himself, he returned to his own place, leaving him to proceed on his journey. As Jacob went on his way, he received intelligence that Esau his brother was approaching him with an armed force; whereat he was greatly alarmed, and divided his flocks and herds into two bands, so that if Esau were to come into contact with the one, the other might escape. He likewise sent forward his family, but tarried himself behind.

"And Jacob was left alone; and there wrestled a man with him, until the breaking of the day. And when he saw that he prevailed not against him, he touched the hollow of his thigh: and the hollow of Jacob's thigh was out of joint, as he wrestled with him. And he said, Let me go, for the day breaketh. And he said, I will not let thee go, except thou bless me. And he said into him, What is thy name? And he said, Jacob. And he said, Thy name shall be called no more Jacob, but Israel: for as a prince hast thou power with God, and hast prevailed. And Jacob asked him, and said, Tell me, I pray thee, thy name. And he said, Wherefore is it that thou dost ask after my name? And he blessed him there. And Jacob called the name of the place Peniel: for I have seen God face to face, and my life is preserved."

After this most singular occurrence, Jacob passed on. At length he was met by Esau and four hundred men! But far different was that meeting from the one he had anticipated. Lo! "Esau ran to meet him, and embraced him, and fell on his neck and kissed him; and they wept!" After a most touching interview, Esau returned on his way to Seir, and Jacob journeyed to Succoth, where he built him a house, and made booths for his cattle. He at length came to Shalem, a city of Shechem, in the land of Canaan, where he bought a parcel of a field of Hamor, the father of Shechem. It was about this period that occurred the massacre of the Shalemites by the sons of Jacob, which we have already noticed. After several additional journeyings, Jacob reached Hebron, the home of his father Isaac; soon after which Isaac died, aged 180, and was buried by his sons Esau and Jacob. Here Jacob took up his permanent abode.

Jacob had a great partiality to one of his sons by the name of Joseph, on which account his brethren envied him. Watching their opportunity, they sold him to a company of Ishmaelites that were on their way to Egypt, and made their father believe that he had been destroyed by wild beasts. Joseph was carried to Egypt, and sold to an officer of Pharaoh by the name of Potiphar. By a strange concurrence of circumstances, the relation of which may be found in the xxxix. xl. and xli. chapters of Genesis, Joseph was introduced to the notice of Pharaoh as an interpreter of dreams, for the purpose of interpreting certain dreams of Pharaoh himself. Those dreams Joseph explained as the omens of a great famine; the consequence of which was, that he was exalted to the highest post of honour under the king, and measures were adopted to lay up stores of provision against the time of need.

The dearth at length came on. It was of great extent, embracing various countries, among which was the land of Canaan. Jacob being apprised that corn was to be obtained in Egypt, sent thither his sons to purchase it. They were recognised by Joseph, but they did not recognise him. He did not choose at first to make himself known to them, but by way of experiment spake roughly to them, and retained one of them as a pledge that they were not spies, demanding at the same time that they should bring their young brother Benjamin with them the next time they came, as a proof that their account of themselves was authentic. They returned with their loads of corn to their father, and were not long after compelled by the famine to go again to Egypt for more, and accordingly took Benjamin with them. It was on the occasion of this visit, that Joseph, to their utter astonishment, confusion, and terror, revealed himself to them as their brother! Their fears, however, were soon dispelled, by his kind treatment, who loaded them with favours, and sent them back to their father, requesting him to come down to

Egypt. On receiving intelligence that Joseph was still alive, and governor of that land, the old patriarch fainted with joy. He finally journeyed thither, where he once more beheld his Joseph, whom he had long supposed dead. He continued in Egypt till his death, which happened seventeen years after, in his hundred and forty-eighth year. His sons carried his corpse to the land of Canaan, and buried it with those of Abraham and Isaac; after which, they again returned to Egypt, and became permanent inhabitants dwelling, however, by themselves in the land of Goshem, where they dwelt before the death of their father. At the age of 110 years died Joseph, enjoining upon his brethern to carry his bones with them, when they should return to the land of Canaan.

After these things there arose a new king in Egypt, who knew not Joseph. Fearing that the Israelites were becoming too numerous for the safety of his kingdom, he commenced against them a system of intolerable persecution. Their cries of distress went up to heaven, and God, in answer to those cries, sent his servant Moses with a message to their oppressor, bidding him to let them go free. But he refused, and added yet more to their burden. As a punishment for his obstinacy, God sent upon Egypt, by the hand of Moses and Aaron his brother, divers judgments; which finally compelled its monarch to assent to their departure.

Having brought down the history of the Israelites to this point, we will pause here in relation to them, and bring forward that of the remaining nations to the same epoch.

NATURAL HISTORY.

THE MUSK OX.

To civilized man, the extreme northern regions may appear cheerless and uninviting, because they are subjected to the almost unrelenting influence of wintry skies. Yet we have already seen that they are the favorite resorts of multitudes of animals, varying in size, characters, and habits.

A species remains to be described which, of these forbidding regions, prefers the most barren and desolate parts, and is found in the greatest abundance in the rugged and scarcely accessible districts lying nearest the North Pole. This species, so far from being condemned to a life of extreme privation and suffering, appears to derive as much enjoyment from existence, as those which feed in luxuriant pastures, or bask in the genial rays of a summer sun.

In destining the musk ox to inhabit the domains of frost and storm, nature has paid especial attention to its security against the effects of both; first, by covering its body with a coat of long, dense hair, and then, by the shortness of its limbs, avoiding the exposure that would result from a greater elevation of the trunk. The projection of the orbits of the eyes, which is very remarkable in this species, is thought by Parry to be intended to carry the eye clear of the large quantity of hair required to preserve the warmth of the head.

Although some few items relative to this animal are to be gathered from the works of the recent explorers of the northern regions, it is to Hearne that we are almost exclusively indebted for the natural history of the musk ox, as we have already been for that of most of the animals inhabiting the same parts of the continent. This excellent and accurate observer travelled, in the years 1769, '70, '71, and '72, and it is only to be regretted that he did not write down all he knew in relation to the northern animals. He appears to have frequently thought that what was so familiarly known to him, would not be of much use to others, and has thus withheld knowledge that few individuals can have a similar opportunity of gaining. Notwithstanding this, he has anticipated all the recent explorers in every essential observation.

Hearne states, that he has seen many herds of musk oxen in the high northern latitudes, during a single day's journey, and some of these herds contained from eighty to a hundred individuals, of which number a very small portion were bulls, and it was quite uncommon to see more than two or three full grown males, even with the largest herds. The Indians had a notion that the males destroyed each other in combatting for the females, and this idea is supported by the warlike disposition manifested by these animals during their sexual seasons. The bulls are then so jealous of every thing that approaches their favorites, that they will not only attack men or quadrupeds, but will run bellowing after ravens or other large birds that venture too near the cows.

Musk oxen are found in the greatest numbers within the arctic circle; considerable herds are occasionally seen near the coast of Hudson's Bay, throughout the distance from Knapp's Bay to Wager Water. They have in a few instances been seen as low down as lat. 60° N. Capt. Parry's people killed some individuals on Melville Island, which were remarkably well fed and fat. They were not commonly found at a great distance from the woods, and when they feed on open grounds, they prefer the most rocky and precipitous situations. Yet, notwithstanding their bulk and apparent unwieldiness, they climb among the rocks with all the ease and agility of the goat, to which they are quite equal in sureness of foot. Their favorite food is grass, but when this is not to be had, they readily feed upon moss, the twigs of willow, or tender shoots of pine.

The appearance of the musk ox is singular and imposing, owing to the shortness of the limbs, its broad flattened crooked horns, and the long dense hair which envelops the whole of its trunk, and hangs down nearly to the ground. When full grown, the musk ox is ten hands and a half high, according to Parry, and as large as the generality, or at least the middling size of English black cattle; but their legs, though large, are not so long; nor is their tail longer than that of a bear, and like the tail of that animal it always bends downwards and inwards, so that it is entirely hid by the long hair of the rump and hind quarters. The hunch on their shoulders is not large, being little more in proportion than that of a deer. Their hair is in some parts very long, particularly on the belly, sides, and hind quarters; but the longest hair about them, particularly the bulls, is under the throat, extending from the chin to the lower part of the chest, between the forelegs; it there hangs down like a horse's mane inverted, and is full as long.

The winter coat of the musk ox is formed of two sorts of hair, which is generally of brownish red, and in some places of a blackish brown colour; the external being long, coarse, and straight, and the internal fine, soft, and woolly. The outer hair is so long that it hides the greater part of the limbs, causing them to look disproportionately short. As the summer comes on, the short woolly hair is gradually shed, but the summers are so hot in these high latitudes, that the woolly coat commences growing almost immediately after the old coat is shed, so that the entire winter coat is completed by the return of the cold weather.

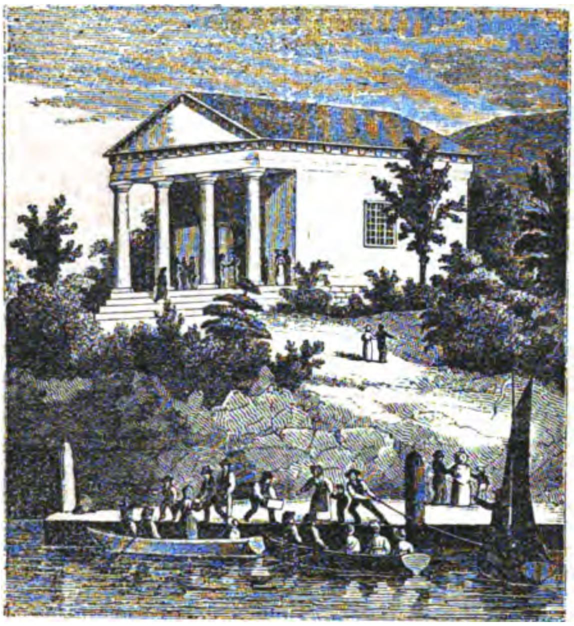
From the shortness of the limbs and the weight of the body, it might be inferred that the musk ox could not run with any speed; but it is stated by Parry, that although they run in a hobbling sort of canter, that makes them appear as if every now and then about to fall, yet the slowest of these musk oxen can far outstrip a man. When disturbed and hunted, they frequently tore up the ground with their horns, and turned round to look at their pursuers, and never attempted to make an attack.

The month of August is the season in which the musk bulls are most disposed to combat, as they then fight furiously with each other for the females, and are jealous of the approach of every thing as already stated. The cows calve about the end of May or the beginning of June; the calves are frequently whitish, but more commonly marked by a white patch or saddle upon the back.

The musk oxen killed on Melville island during Parry's visit were very fat, and their flesh, especially the heart, although very highly scented with musk, was considered very good food. When cut up, it had all the appearance of beef for the market. Hearne says, that the flesh of the musk ox does not at all resemble that of the bison, (*Bos Americanus,*) but is more like that of the moose, and the fat is of a clear white, tinged with light azure. The young cows and calves furnish a very palatable beef, but that of the old bulls is so intolerably musky as to be excessively disagreeable. A knife used in cutting up such meat becomes so strongly scented with this substance as to require much washing and scouring before it is removed. Musk ox flesh, when dried, is considered by hunters and Indians to be very good. "In most parts of Hudson's Bay, it is known by the name of Kew-hagon, but amongst the northern Indians it is called Achees." The weight of the musk ox, according to Parry, is about 700 lbs.; that of the head and hide is 130 lbs.

The horns of the musk ox are employed for various purposes by the Indians and Esquimaux, especially for making cups and spoons. From the long hair growing on the neck and chest, the Esquimaux make their muscheto wigs, to defend their faces from troublesome insects. The hide of the musk ox makes good soles for shoes, and is much used by the natives for this purpose.

During the months of August and September, the musk oxen extend their migrations to the North Georgian and other islands bordering the northern shores of the continent. By the first of October they have all left the islands and moved towards the south. By Franklin's expedition, they were not seen lower than 66° N.; though, as we have before stated from Hearne, they are occasionally seen as low as 60°.



CHURCH OF OUR LADY OF COLD SPRING.

We herewith present our readers with a sketch by our friend Weir, of the catholic chapel of "Our Lady of Cold Spring," one of most classical and beautiful little churches we have ever seen. The building is of brick, coloured with a composition which gives it the character and appearance of a light, yellowish-brown stone; and the portico, which is of the Tuscan order, of the most correct proportions. Its situation, opposite West Point, on a high rock overhanging the Hudson, and surrounded by majestic mountains, is extremely well chosen; and the traveller, sailing up and down the river, cannot but be struck with its romantic beauty.

It was our fortune to be present at the consecration of this little temple, a few weeks since,* by the Right Rev. Bishop Dubois, assisted by the Rev. Messrs. Power, Varela, and O'Reilly. The scene was most impressive. It was a calm Sabbath morning, full of quiet and repose, accompanied by a slight haziness of the atmosphere, that communicated a soft and gentle hue to the surrounding hills, and disposed the mind to corresponding impressions. It was in the midst of the most majestic of His works that a temple was to be consecrated to the God of nature and of nations. The area within being insufficient to contain the visiters and congregation, many of the latter might be seen kneeling without on the hard rock, and offering up their silent devotions. Religion never looked more solemn or more divine, than when its rites were thus administered on the rock of ages. Choristers responded to the strains of the amiable and venerable bishop, whose gray hairs added dignity to his devotion, and a fine band of music attended, whose notes might be heard in the recesses of the mountains. It was a scene we shall not soon and wish never to forget, for it was full of lofty inspiration, accompanied by associations of religion, of charity, and of philanthropy.

We could not help cherishing the hope, that the erection of this chaste and elegant little building, might form the commencement of an era of good-will among all religious denominations. It seemed to us like the temple of peace; as the shrine where all who worship the same God, and depend for salvation on the same Saviour, might come and lay down that load of unchristian antipathies which has separated mankind into inveterate factions, and deluged the earth with blood. Its history should be told, that the example may be followed.

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* Sunday the twenty-first of September.

The village of Cold Spring and its neighbourhood, from various causes, had become the residence of a large number of poor Irish catholics, and though there are churches of various denominations at that place, there was not one to which they could resort without hearing their faith questioned, and the objects of their veneration called by the most opprobrious names, agreeably to the orthodox practice of too many of the preachers of that religion which is all charity, all philanthropy, all love to our fellow creatures.

These people were too poor to provide themselves with a place of worship, and to none are the rites of their religion more important to their social habits and morals than the labouring classes of the catholic church. In this state of things, a gentleman having large interests in the neighbourhood, Mr. Gouverneur Kemble, came forward to their assistance. He gave them the ground on which the church stands, and a considerable portion of the means for its erection, besides furnishing the plan, and giving a paternal superintendence to its progress and completion. The indefatigable exertions of the Rev. Mr. O'Reilly, pastor of the congregation, supplied the remaining funds. Mr. Kemble is a protestant, and so are we; but this shall not prevent our bearing testimony to the liberal and philanthropic spirit, which, overlooking the metaphysical refinements of religion, resorts to its spirit and essence, and recognises all the worshippers of one Creator, and one Saviour of the world, as fellow-creatures and fellow-christians, who, however they may differ in modes and forms, look up to the same eternal source in this life, and the life everlasting.

Convenience and necessity are often found in conflict with the natural taste of mankind for the picturesque and beautiful; and in nothing more remarkably so, than in the location of religious edifices. If it were possible, we would always have our houses of worship isolated from the busy haunts of traffic and of pleasure. In cities this can never be effected; but in the country we delight to see the sanctuaries of religion standing apart from amid the common scenes and objects of worldly care and interest and occupation. They should be held sacred from all sights and sounds of earthly import; the solemn stillness of their presence can only harmonize with the murmur of the breezes, the mysterious rustling of the foliage, and the thousand soothing tones of nature's music. The walk to the house of God should be through smiling fields, shaded by the verdant luxuriance of forest trees—the atmosphere that floats around should be the pure, fresh air of heaven, breathing serenity and peace; the objects that it offers to the eye should be only such as invite to serious meditation, with no intruding incident or object of the world's contaminating impress, to break the chain of humble aspiration, that would lead to heavenly things. The throne of religion is man's heart; but nature, in her calm untrammelled beauty, is religion's meetest empire.—*N. Y. Mirror.*

CAVERN OF THE GUACHARO.

Baron Humboldt, in his *Personal Narrative*, gives an account of a remarkably interesting cavern, in the province of New Andalusia, about three short leagues from the convent of Caripe, and called the Cavern of the Guacharo.

A narrow path led the travellers across a fine verdant plain, when they turned westward, and were guided by a small river which issues from the mouth of the cave. During three quarters of an hour, they continued to ascend, sometimes walking in the water, and sometimes between the torrent and a wall of rocks, by a path rendered slippery and fatiguing by masses of earth and trunks of fallen trees, which they had to surmount. On a sudden turn of the road, which winds like the stream, they found themselves before the immense opening of the grotto. Baron Humboldt states that the aspect of the place was majestic, even to an eye accustomed to the picturesque scenery of the Alps; he had visited the Peak Cavern, in Derbyshire, and was acquainted with the different caves of Franconia, the Harz and Carpathian mountains, and the uniformity generally observable in all these, led him to expect a scene of a similar character in that which he was about to visit; but the reality far exceeded his expectations; for, if the structure of the cave, and the variety and beauty of the stalactites resembled those he had elsewhere witnessed, the majesty of equinoctial vegetation gave an individual character and indescribable superiority to the entrance of the Cavern of the Guacharo.

The entrance is a vaulted arch, eighty feet broad and seventy-two feet high; the steep rock that surmounts this opening is covered with gigantic trees, mixed with creeping and climbing plants and shrubs, brilliant with blossoms of the richest colours, and the most varied forms.* These form natural festoons which hang before the mouth of the cave, and are gently agitated by the passing currents of air. What a contrast between such a scene and the gloomy entrances to the caverns of northern climes, crowned with oaks and sombre larches! But this luxuriant vegetation was not alone confined to the exterior; the traveller, on following the banks of this subterranean stream into the grotto, beheld them with astonishment, adorned for thirty or forty yards with the Praga palm-tree, plantain-leaved heliconias, eighteen feet high, and arums that resembled trees in their size!

It was not found necessary to light their torches till they had reached the distance of 430 feet, owing to the continuous direction of the cavern, which allows the light of day to penetrate thus far; and when this began to fail, the hoarse cries of the nocturnal birds, whence the place derives its name and celebrity, began to be audible from a distance. The Guacharo is about the size of a common fowl, and resembles in form the vulture tribe, with a beak surrounded by stiff hairs; its plumage is of a dark blueish gray, mixed with small streaks of black; white large heart-shaped spots, bordered with black, mark the head, wings, and tail; it is strictly a nocturnal bird, and is almost the only one which does not prey on animals, its food being fruits. The shrill, discordant noise made by thousands of these birds, brought from the inmost recesses of the cave, and reverberated from the arched roofs, form a clamor of which it is impossible to form an idea. Their Indian guides, by fixing torches to the ends of long poles, showed travellers the nests of the bird, which were constructed in funnel-shaped holes, with which the roof of the grotto was pierced in all directions, and generally at about sixty feet above their heads.

There is an annual destruction of these birds by the Indians, who obtain from their young an oil much used in that country. They bring down their nests by means of long poles, and many thousands of the old birds are killed while endeavoring to defend their helpless progeny; they keep hovering over the heads of their enemies, uttering the most discordant cries. The young that fall with the nests are immediately opened, and a thick layer of fat that is found in their intestines is melted down in pots of clay, and is known by the name of guacharo butter, (Manteca or Aceite,) it is half liquid, transparent, without smell, and may be kept a year without becoming rancid, and, according to the Baron who ate it at the convent, where no other oil is used, it imparts no disagreeable taste or smell to the food dressed with it. The habits of the bird, excluded from daylight, using little exercise, and feeding on vegetable food, account for the production of this quantity of fat in a manner analogous to that in which geese and oxen are known to become large by similar modes of treatment; the quantity of this oil obtained, bears but a small proportion to the carnage thus made annually by the hunters; they do not obtain more than a 150 or 160 bottles, of about sixty cubic inches each, of pure *manteca;* the rest, which is less transparent, is kept in earthen vessels.

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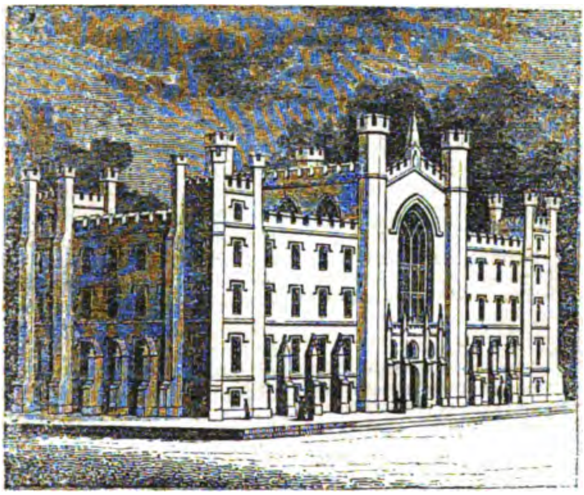
* For the sake of our botanical readers, we may state, that among these the Baron enumerates a Dendrobium (family Orchideæ) with golden flowers, spotted with black, and three inches long! A Bignonia, with a violet blossom; a purple Dolichos, and a magnificent Solandra, the deep orange flower of which has a fleshy tube, four inches long.

There are two causes why this destruction of the birds at the *oil-harvest*, as it is termed, have not extirpated the race; one is, that the Indians are prevented by superstition from penetrating very far into the interior of the cavern, and the other, that neighbouring caverns too small to be penetrated by man, afford a place of security to them to breed and multiply in; at least it appears that no perceptible diminution of their numbers has been observed.

The travellers in continuing to explore the cave, followed the banks of the stream which issues from it, and is from twenty to thirty feet wide; they pursued this course as far as the hills formed of the calcareous depositions admitted. When the torrent wound among high masses of stalactites, they were often obliged to descend into the bed of the stream, which is only about two feet in depth; on its banks they observed great quantities of palm-tree wood, the remains of trunks the Indians made use of to climb to the nests which they could not otherwise get down.

Still pursuing the course of the river, the cavern preserving the same width and height to the distance of 1458 feet from the mouth; the travellers on turning round, were struck with the singularly beautiful appearance which a hill covered with the richest vegetation, immediately fronting the entrance of the grotto, presented; this, brilliantly illuminated by the sun's rays, and seen through the vista of the dark cave, formed a striking contrast to the surrounding obscurity; while the large stalactites depending from the roof were relieved against the luminous back ground of verdure. After surmounting, with some difficulty, an abrupt rise in the ground where the stream forms a small cascade, they found that the cave diminished in height to forty feet, but retained its original direction; here a blackish mould was found, either brought by the rivulet, or washed down from the roof by the rain water, which penetrates the crevices of the rock; and in this, to the delight of the travellers, they found seeds growing, which had been brought thus far into the cave by the birds, but so altered by the deprivation of light, that they could not even recognise the species of plant thus produced under such unfavourable circumstances. It was found impossible to persuade the Indian guides to advance further; the cries of the birds rendered still more horrible by the contraction of the cave, had such an effect on their minds, that they absolutely refused to proceed; and to the regret of Humboldt and his friend they were compelled to retrace their steps.



THE NEW YORK UNIVERSITY.

With a correct view—drawn by Davis and engraved by Adams.

This edifice is built of marble from the quarries at Sing Sing, and exhibits a specimen of the *English collegiate* style of architecture. It is situated between Washington Place and Waverly Place, and fronts Washington Square towards the west. The building is one hundred feet wide, and one hundred and eighty feet long. In front, this oblong is divided into five parts—a central building, with wings flanked by towers, one rising on each of the four corners of the edifice. This central building, or *chapel*, is superior to the rest in breadth, height, and character; and is somewhat similar to that of King's College, Cambridge, England —a masterpiece of pointed architecture, and the model for succeeding ages. It is fifty-five feet broad and eighty-five deep, including the octangular turrets, one of which rises at each of the four corners. The two ends are gabled, and are, as well as the sides, crowned with an embattled parapet. The chapel will receive its principal light from a window in the western end. This window is twenty-four feet wide and fifty high. It has *eight lights* and two *embattled transoms*. The heads of the lights are *cinque-foiled* in a *plain arch*, and the divisions above are *quatre-foiled*. Over the head of the window is a drip-stone with plain returns. From the central building, or chapel, *wings* project right and left, and are four stories in height, flanked by towers of five, supported by angular buttresses of two stages, running above an embattled parapet, and are at the top themselves embattled. The windows in the wings have square heads, with two lights, a plain transom, and the upper division *tre-foiled*. The heads of the windows are *labelled*, and have *plain returns*. The lower range of windows is set on a tablet, which serves as a base, and the two ranges next above are set on strings, which return around the turrets and stop against the buttresses. Buttresses are attached to the wall of the wings, both in front and flank, and rise two stories, finishing on the front face with *triangular crocketted heads*, crowned with a finial. The battlemented parts throughout the building have horizontal capping, with the exception of the gable, where the capping follows the slope. The principal entrance is under the great western window, through a richly moulded and deeply recessed portal, flanked by buttresses of two stages, the upper stage set diagonally, and rising above an embattled parapet, finishing in triangular crocketted heads, crowned with a *pinnacle*. The doors are of oak, richly panelled, and filled with *tracery* of *open-work*, closely studded with bronze. Entering at the west and principal door, you pass on the right to the room of the janitor, and to the apartments of the professor of chemistry and botany, or on the left to the office of the clerk of the university, and rooms for classes in the ancient and modern languages. Ascending a broad flight of steps immediately before the great western entrance, you reach the principal floor, which contains rooms devoted to the use of literary societies, one large lecture room, and rooms for classes in mathematics, natural philosophy, rhetoric, and *belles-lettres*, intellectual and moral philosophy, history, civil engineering, and the higher classes in ancient and oriental languages. On the upper floors, right and left of the chapel, are the studio of the professor of design with the cabinet of models and illustrations, and other extensive apartments for the fine arts, libraries, and collections in natural history, mineralogy, and antiquities. An observatory is also to be erected on one of the towers.

The building is now nearly at its height, and will be ready for occupation in May next, and will form a noble ornament to the square on which it fronts.

The university, however, has not waited for the completion of its own buildings, in order to commence the business of instruction. The institution was opened for the reception of students on the first Monday of October, 1832; and its success, as to the number of its students and the efficiency and usefulness of its extended system of instruction, we believe, has even surpassed the expectations of its friends. The officers already appointed are the following, viz.:—

Rev. J. M. Matthews, D. D. Chancellor.
Rev. H. P. Tappan, Professor of moral and intellectual philosophy and belle-lettres.
R. B. Patton, Professor of the Greek language and literature.
Rev. J. Proudfit, Professor of the Latin language and literature.
Rev. George Bush, Professor of Hebrew and Oriental languages.
C. W. Hackley, Professor of mathematics.
W. Norton, Professor of natural philosophy.
Lewis C. Beck, Professor of chemistry and botany.
L. D. Gale, Acting Professor of geology and mineralogy.
S. F. B. Morse, Professor of the literature of the arts of design.
D. B. Douglass, Professor of architecture and of civil engineering.
Charles L. Parmentier, Professor of the French language and literature.
Lorenzo L. Da Ponte, Professor of the Italian language and literature.
Charles Rabadan, Acting professor of the Spanish language and literature.
Rev. W. Erneupeutsch, Professor of the German language and literature.

The plan of instruction embraces a full course in the classical, mathematical, and philosophical studies, usually pursued in our colleges; and we are glad to perceive, from the regulations of the university, that the amount of requirements from students who enter this course, and become candidates for the Baccalaureate, is unusually great. It is much to be desired that the standard of scholarship in our country should be elevated; and that our liberally educated young men should aim at becoming finished scholars, and not be satisfied with the attainment of a degree after a hurried progress through their academical studies. We hope this object will be steadily pursued by the university, and that the institution will meet with the hearty co-operation of the public in its efforts for the accomplishment of so desirable a step in American literature.

The benefits of the institution are by no means confined to the students who pursue this full course. The system of instruction is so arranged that any young gentleman may select for himself, or his guardian for him, such branches of education as may be most to his taste, or as may be most important to him in the business of his future life; on the completion of which, he receives an honorary testimonial as to his progress and attainments. In this way, advantages are presented to young gentlemen who may wish to devote themselves to the more practical professions, which, in a city like this, are found to be of great importance.

Recently as the institution has been opened, it has already become the resort of several graduates from different colleges, who wish to extend their education beyond the usual college course. This is the necessary consequence of the variety and extent of the professorships already established; and it must become still more so, as other departments of the whole university system shall be filled up.

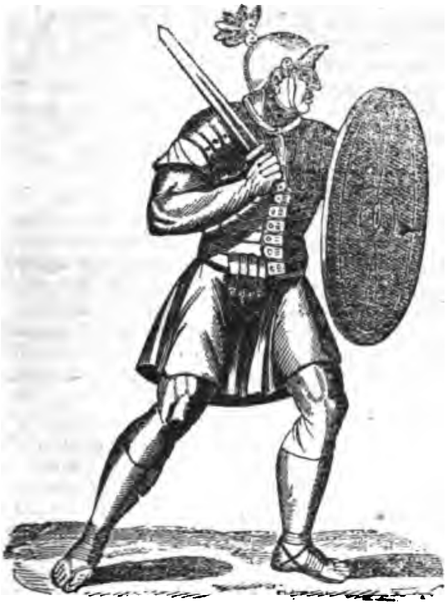
We learn, with much pleasure, that in addition to the present appointments in literature and the sciences generally, the university is about to organize a faculty of law. This we consider a great desideratum in our city, and if the appointment of law professors is judiciously made, we have no doubt that this department will be numerously attended. It has long been a subject of wonder and regret, that notwithstanding the eminence and abundance of legal talent in our state, our young men have been obliged to go abroad for the advantages of a law school. We have heard of several of our most eminent jurists as already in nomination for the contemplated appointments.

Before we close this notice we have a suggestion to offer, which, not for our own gratification, but for the cause of taste and elegance, and the greater beauty of the edifice, we hope, may not be suffered to fall unheeded to the ground. By a glance at the engraving it will be seen, that over the principal entrance is a noble window of vast dimensions, by which the chapel of the university is lighted. Why should not this window be of rich stained glass? The art of making it, which was so long lost, is now restored, and glass may be procured of hues as brilliant and unfading as those with which the rays of light are tinged that fall upon the tessalated pavements of the old cathedrals in Europe. We know not whether the trustees, under whose direction the university is built, have the right and power to adopt the proposition, nor whether they would feel themselves justified in making the additional expenditure; but even should they not, we trust that there is enough of public spirit and munificence in this wealthy city to obviate all difficulties of that nature. It would be a generous and noble deed in the occupants of the houses near the university to join in raising a fund sufficient for the purpose; or it might be obtained by a general subscription. In one way or the other, we hope that the donation will be made; confident that in witnessing the splendid and beautiful effect of the stained glass, there is no man who will not feel pride and pleasure in the thought that he was instrumental in procuring it.—*N. Y. Mirror.*

SELF-EDUCATION.

Much less of success in life is in reality dependant upon accident, or what is called luck, than is commonly supposed. For more depends upon the objects which a man proposes to himself; what attainments he aspires to; what is the circle which bounds his visions and thoughts; what he chooses, not *to be educated for*, but *educate himself for;* whether he looks to the end and aim of the whole of life, or only to the present day or hour; whether he listens to the voice of indolence or vulgar pleasure, or to the stirring voice in his own soul, urging his ambition on to laudable objects.

Nothing is more easy than to represent as impertinences any part of learning that has no immediate reference to the happiness or convenience of mankind.



ANCIENT ARMOUR.

We hope, most sincerely, that the world is not to be scourged by cruel and unnatural wars much longer; and that the rising generation will soon read every thing relating to this subject as they now do the accounts of gladiatorial combats and other wicked practices, which have long ago ceased. Still, it may not be amiss to treat of warlike subjects occasionally.

The engraving represents the "panoply" or complete armour of the Jews and other nation, 1800 years ago. Perhaps we may get as lively an account of what it consisted from the sixth chapter of the epistle of St. Paul to the Ephesians, as from any part of history. The apostle mentions it incidentally, but his account is very full, as the following extracts will show.

"Having your loins *girt about* with truth, and having on the *breastplate* of righteousness; and your feet *shod* with the preparation of the gospel of peace; above all, taking the *shield* of faith—the *helmet* of salvation, and the *sword* of the spirit."

It should be mentioned, however, that the breastplate was something more than a mere plate of metal worn over the breast. It sometimes covered all the fore part of the body, and extended a little way over the arms; not far, however, for this would have diminished their activity. By shoes, too, appear to be meant, cases for the whole leg, almost from the foot to the body. As to their shields, they were sometimes very large; and it was not uncommon for a warrior to have an armour-bearer to go before him, and carry his shield for him. Indeed, all the armour was heavy. In the Atheneum of Boston, are pieces of ancient armour preserved, such as helmets and breastplates; the great weight of which would surprise you if you should see them.

MYTHOLOGY.

BELLONA.

"Bellona is the goddess of war, and the companion of Mars; or, as others say, his sister or wife. She prepares for him his chariot and horses when he goes to fight. It is plain that she is called Bellona from *bellum.* She is otherwise called Duel from *duellum*, or from the Greek word *belone* a 'needle,' whereof she is said to be the inventress. Her priests, the Bellonarii, sacrificed to her in their own blood; they hold in each hand naked swords, with which they cut their shoulders, and wildly run up and down like madmen; upon which people thought that (after the sacrifice was ended) they were able to foretell future events. Claudian introduces Bellona combing snakes; and another poet describes her shaking a burning torch, with her hair hanging loose, stained and clotted with blood, and running through the midst of the ranks of the army, uttering horrid shrieks and dreadful groans.

Her torch Bellona waving through the air,
Sprinkles with clotted gore her flaming hair,
And through both armies up and down doth flee;
While from her horrid breast Tisiphone
A dreadful murmur sends.

And in Homer we have a description of a battle in which Mars, Minerva, and Discord, are engaged:—

Loud clamours rose from various vations round;
Mix'd was the murmur, and confus'd the sound.
Each host now joins, and each a god inspires;
These Mars incites, and those Minerva fires.
Pale Fright around, and dreaded Terrour reign;
And Discord, raging, bathes the purple plain.
Discord, dire sister of the slaught'ring pow'r,
Small at her birth, but rising ev'ry hour;
While scarce the skies her horrid head can bound;
She stalks on earth, and shakes the world around:
The nations bleed where'er her steps she turns:
The groan still deepens, and the combat burns.

"Before the temple of this goddess there stood a pillar called Bellica, over which the herald threw a spear, when he proclaimed war.

"Bellona is a subordinate being, who, even by her appearance and deportment, betrays her inferior standing. In her wild aspect, no quiet look discloses the divine spark of inward wisdom, or inventive genius. Her glaring eye darts rage and fury; her figure is not graced with that nobility of air in which the ruler of battles, and the august guide of the heroes is to be recognised; her headlong impetuosity, her cruel desire of murder and devastation, discover the worthy companion of Discord, as well as the ferocious driver of the snorting coursers of Mars."

VICTORY.

"Victory, called by the Greeks Nike, was honoured as a deity by the Grecians. Hesiod says, she was the daughter of Styx and Pallas. The Sabines called her Vacuna; from this name came the feast which the ancients called Vacunalia. Plutarch asserts, that the Egyptians called Victory Napthe. She was an attendant of Mars.

"The goddess Victory had several temples at Rome. Her figure is to be met with upon a great many monuments, marbles, gems, and medals. She is generally represented with wings, holding a branch of a palm-tree in one hand, and a crown of laurel in the other We see her sometimes mounted upon a globe, to show that Victory rules over all the earth: we meet with them upon the medals of the emperors, to signify that they have conquered all the world, and that all nations are subject to their government. Victory, though very rarely, is likewise found without wings, writing upon a shield, supported by a pillar, and holding her left foot upon a helmet. The Greeks pictured her sometimes in that manner, and called her Apteros, which signifies without wings. Pusanias says, that there was at Athens a Victory which had no wing, and that Calamis the sculptor took a copy of it. The Athenians made her without wings, says the same author, that she might continue with them, and not fly away any where else. To the same purpose we meet with two verses in the Anthologia Græca, which were put upon a statue of Victory, whose wings were burnt by a flash of lightning. The sense of the verses is this. Rome, queen of the world, thy glory can never perish, since unwinged victory cannot fly away."

THE STORY OF TEREUS.

"Tereus, the son of Mars, by the nymph Bistonis, married Progne, the daughter of Fandion, king of Athens, when he himself was king of Thrace. This Progne had a sister called Philomela, a virgin in modesty and beauty inferior to none. She lived with the father at Athens. Progne being desirous to see her sister, asked Tereus to bring Philomela to her, with which he complied. Tereus fell desperately in love with Philomela; and, as they travelled together, because she refused to favour his addresses, he overpowered her, and cut out her tongue; and returning afterwards to his wife, he pretended that Philomela died on her journey; and that his story might appear true, he shed many tears, and put on mourning. But injuries sharpen the wit, and a desire of revenge makes people cunning: for Philomela, though she was dumb, found out a way to tell her sister of the villany of Tereus. She described the violence offered her in embroidery, and sent the work folded up to her sister. Progne no sooner viewed it, than she was so transported with passion that she could not speak, her thoughts being wholly taken up in contriving how she should avenge the affront. First, then, she hastened to her sister, and brought her home without Tereus's knowledge. While she was thus meditating revenge, her young son Itys came and embraced his mother; but she carried him aside into the remote parts of the house, and slew him while he hung about her neck. When she had killed him, she cut him into pieces, and dressed the flesh, and gave it to Tereus for supper, who fed heartily on it. After supper he sent for his son Itys: Progne told him what she had done, and Philomela showed him his son's head. Tereus, incensed with rage, rushed on them both with his drawn sword; but they fled away, and fear added wings to their flight; so that Progne became a swallow, and Philomela a nightingale. Tereus was also changed into a hoopoe [*upupa*,] which is one of the filthiest of all birds. The gods out of pity changed Itys into a pheasant.

THE HORRORS OF WAR.

The harrowing incident related in the following extract, is but one of a multitude, equally dreadful, which occurred at the storming of Cuidad Rodrigo. It is taken from "Recollections of the war in Spain," by Lieutenant Kennedy.

"Passing through a narrow street with two Scottish sergeants, I heard the shriek of a female. Looking up, we saw at an open lattice, by the light of a lamp she bore, a girl about sixteen; her hair and dress disordered, the expressive olive countenance marked by an anguish and extreme terror.—A savage in scarlet uniform dragged her backward, accompanying the act with the vilest execrations in English. We entered the court-yard, where the hand of rapine had spared us the necessity of forcing a passage. My companions were humane, conscientious men, with the resoluteness that in military life almost invariably accompanies these qualifications. Armed for whatever might ensue, they kept steadily by me until we arrived at a sort of corridor, some distance from the extremity of which issued the tones of the same feminine voice imploring mercy in the Spanish tongue. Springing forward, my foot slipped into a pool of blood. Before I could recover, the door of the apartment whither we were hurrying opened, and two soldiers of my own company discharged their muskets at us, slightly wounding one of the gallant Scots.—Intemperance had blinded the ruffians, and frustrated their murderous intention.—We felled them to the ground, and penetrated into the chamber.

"The room wherein we stood had been devoted to the festivities of a retired family of moderate fortune. It contained the remains of those decent elegancies that properly appertain to the stranger's apartment in a dwelling of the middle class. Mutilated pictures and fragments of expensive mirrors strewed the floor, which was uncarpeted, and formed of different kinds of wood curiously tasselated. An ebony cabinet, doubtless a venerable heirloom, had suffered as if from the stroke of a sledge. An antique sideboard lay overturned: a torn *mantilla* drooped on a sofa, ripped and stained with wine. The white drapery, on which fingers steeped in gore had left their traces, hung raggedly from the walls.

"On investigation, the sergeants found the dead body of a domestic whose fusil and dagger showed that he had fought for the roof which covered him. His beard had been burned in derision with gunpowder. One of his ears was cut off, and thrust into his mouth. In a garret recess for the storage of fruit, two female servants were hidden, who could scarcely be persuaded that they had nothing to fear. Having flown thither at the approach of the ferocious intruders, they had suffered neither injury nor insult. They came to the room where I lingered over an object, unconscious, alas! of my commiseration, and in accents half choked by sobs, called upon Donna Clara. I pointed to the alcove where the heart-broken lady had flung herself on the bleeding corpse of her grey-haired father. She, too, might have had a sheltering place, could her filial piety have permitted her to remain there when her high-spirited sire feebly strove to repel the violators of his hearth.

"Master of a few Spanish phrases, I used them in addressing some words of comfort to the ill-starred girl. They were to her as the song of the summer bird carolled to despair. Her sole return was a faintly recurring plaint, that seemed to say, 'Let my soul depart in peace.'

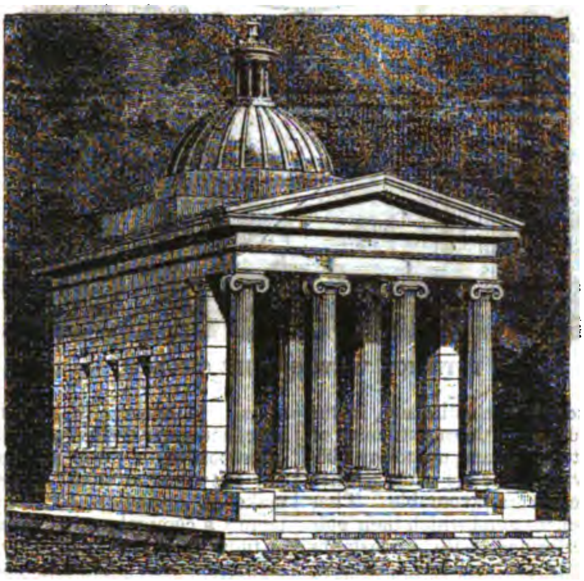
"I motioned to her attendants to separate her from the beloved source of her unutterable sorrow. They could not comply without the application of force bordering upon violence. Bidding them desist, I signified a desire that they should procure some animating restorative. The sergeants withdrew. One of the women held the lamp, the other gently elevated her mistress' head. Kneeling by the couch in the alcove, I poured a little of the liquor into a glass, applied it to her lips—then took it away, until I had concealed my uniform beneath the torn *mantilla*.

"Affliction, thou hast long been my yoke-fellow! Thou hast smitten to the core of my being with a frequent and a heavy hand; but I bless an all-wise and all-merciful God, who tries that he may temper us, that I have not a second time been doomed to witness aught so crushing to the soul—so overwhelming in wo, as the situation of the young creature over whom I watched on the baleful midnight of our victory.

"She had baffled with a might exceeding her sex's strength, against nameless indignities, and she bore the marks of the conflict. Her maiden attire was rent into shapelessness; her brow was bruised and swollen; her abundant hair, almost preternaturally black, streamed wildly over her bosom, revealing in its interstices fresh waving streaks of crimson, which confirmed the tale of ultra-barbarian outrage; her cheek had borrowed the same fatal hue from the neck of her slaughtered parent, to whom, in her insensibility, she clung with love strong as death. Daughter of Spain!—well was it for thy sire that he was gone from a polluted world—well was it for him to whom thou wouldst have flown in thy desolateness, that his place was filled by a stranger to his wounded dove—one who, though devoted as a brother, could better bear up under the bitter ministrations of that hour.

"Through the means adopted, she gave token of revival. Her hand had retained a small gold cross, and she raised it to her lips. The closed lids were slowly expanded from her large dark eyes. A low, agonizing moan followed. I hastened to present the wine. In the act, the *mantilla* fell from the arm which conveyed the glass. Appallingly she shrieked—became convulsed—passed from fit to fit—expired!"

SECTION XIV.



L'EGLISE DU SAINT ESPRIT.

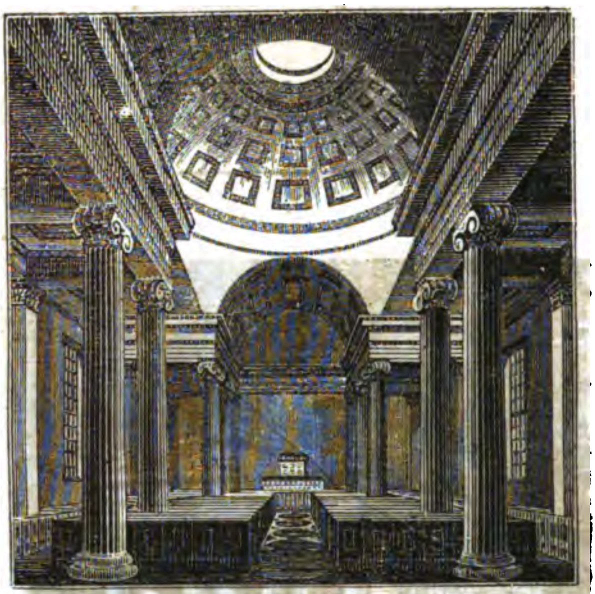
THE CHURCH OF THE FRENCH PROTESTANTS.

This edifice is situated on the corner of Franklin and Church streets. The form is that of a Greek prostyle temple, with a tetrastyle Ionic portico, deeply recessed, having two columns in the pronaos, forming a double range. This double range of columns contributes additional stability, while the great depth of the portico serves the better to afford shelter from the north and east, (which is very desirable in the winter season,) and was also adopted in consequence of the form of the ground, which is long and narrow; as much room being given to the interior as was desired by the vestry, or would form a good proportion to the eye, and give a uniform extension to the voice. The breadth of the front is fifty feet: the height, including the steps, is also fifty feet, and the length is one hundred feet.

The interior is on the plan of the cross, similar, in this respect, to the cathedrals of Europe, having a nave and transept, with a dome over the intersection. Eight richly ornamented Ionic columns, similar to those of the Erectheion, in the Acropolis of Athens, support a semi-circular arched ceiling, at the intersection of the nave and transept, as abovementioned; and the whole is panelled and moulded with the Ionic and Lesbian cymatium, eight inches deep, with the egg, dart, and leaf of enrichment. The exterior of the dome is crowned with a lantern, of the exact size and fashion the monument of Lysicrates, at Athens. The portico is composed from the best examples of Athenian Ionic. It is original in its proportion, and, we believe, the only example of a dipteral portico (a portico with a double range of columns) in existence, the fine ancient examples having perished: and the architect informs us (we know not whether extravagantly) that "the art itself has continued prostrate since the time of Alexander; Rome and England failing in classical architecture, and France and Italy being meretricious."

We have stated that the interior is similar in plan to the cathedrals of Europe. It is only in that it approaches the form of a cross. The disposition of the columns, the form of the ceiling, and the *coup d'œil* of the whole are mainly original; no interior with which we are acquainted presenting the same arrangement, although St. Stephen's, Walbrook, London, the masterpiece of Sir Christopher Wren, furnished the hint. The marble is of the Sing-Sing quarry, and is the best specimen yet furnished from thence. The superintendence was in the care of Mr. N. Wells, of this city.

Such is the technical description of the new French Protestant Church, erected in this city by the congregation that formerly worshipped in Pine street—in a small, antique building, with a low square tower and high conical roof, that, with its purely French aspect, carried the beholder at once in imagination to some time-worn village of Languedoc or La Vendee. This was another of the few antiquities of New York; and it grieved us sorely when the destroying hand of improvement fell also upon its venerable form, and levelled it with the earth upon which it had so long rested, calm, solemn, and peaceful amid the surrounding turmoil of thrifty occupation, like an aged rock unmoved in the restless commotion of the circumfluent waters. It is true, however, that, in this instance, necessity commanded the work to be performed. The edifice had become so small for the accommodation of those who worshipped in it; and the tall warehouses by which it was gradually surrounded, as the streets in the vicinity became the centre of an active and widely-extended commerce, so completely cast the humble church into the shade, that, even at noonday, the light within it was but a short remove from evening dimness. That part of the city, too, had become almost deserted as a quarter of residence, and by far the larger part of the

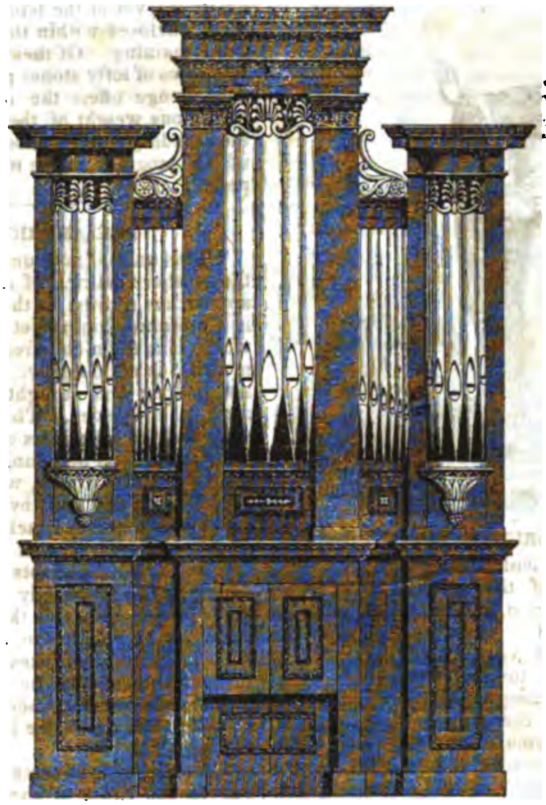


INTERIOR VIEW OF THE CHURCH.

congregation had their houses at such a distance, in the more modern streets toward the northern extremity of the metropolis, as to make it unpleasant, not to say difficult, for them to attend service in the old church, when the weather was in any degree unfavourable. They long endured the inconveniences amid which their public religious duties were performed, with a constancy and patience admirable in themselves, and strikingly indicating the enduring nature of their attachment to the venerable edifice, within whose walls their fathers had bowed the knee in prayer, and listened to the glad tidings of salvation; and, at length, with a munificence and liberality of spirit not less worthy of admiration, raised among themselves a fund sufficient to procure the ground and erect the handsome building, represented in the engraving. The front, equally remarkable for simplicity, magnitude, and elegance, is upon Franklin street, and the spacious and very handsome dwelling-house adjoining it, is the residence of the Reverend Mr. Verren, the pastor of the congregation. Church street, on which the side of the new church extends, already contains, we believe, more religious edifices than any other of equal length in the city—six, including the Baptist meeting-house in Canal street, the front of which is exactly opposite the extremity of the street. In the rear of the new French Protestant church is the Italian opera house, of which we have heard frequent predictions, that it will, at some time or other, be dedicated to the worship of the Almighty, and thus become more in harmony of character with the structures between which it stands.

We have attended the celebration of divine service in the church, and, although we can add nothing to the accuracy or minuteness of the description, *as such*, we are enabled to speak more advisedly of the general effect, and to convey information in relation to some particulars, which, perhaps, may not be without interest to the reader. The first striking impression created upon entering is that of uncommon chasteness and simplicity; the architectural style is more pure and consistent than in any similar edifice that has fallen within our observation, and the character of classic elegance is perfectly sustained throughout, with the single exception of the desk and pulpit, which are too much burdened with ornament, and *cut up*, if we may use the expression, into too many small compartments, for the Doric severity of their form. The predominant feature of the edifice is almost an extreme of elegant plainness; the architect has wisely relied, for his effect, exclusively upón beauty of form and harmony of proportion, in every part except these; and we cannot but think it would have been more judicious to make no exception. The eye of the spectator, after taking a comprehensive glance at the whole, is irresistibly attracted upward by the dome, which, being surmounted by a lantern, pours down a flood of light, with an effect that is equally noble and happy. The decorations or ornaments of this dome are in exceedingly good taste; its interior concave surface is divided into pannels, with elegant but simple mouldings, and the beading and scroll-work at the foot of the dome, where it springs from the ceiling, are rich and graceful. The whole ceiling is arched, resting upon massive entablatures, supported on either side by rows of fluted columns with ornamented capitals. There are no galleries, and the pillars are so judiciously placed in point of distance from each other, as not to diminish, in the slightest degree, the apparent magnitude of the interior. It is sufficiently and comfortably warmed by heated air conveyed through perforations in the floor, from furnaces in the basement story. The house is lighted from both sides, as well as from the dome, by lofty windows of ground glass, and, in this respect, the convenience of the congregation has been as well considered and secured as in any other religious edifice in the city.

At the northern extremity, opposite the altar and pulpit, is an organ loft, containing a superb instrument of excellent tone, erected by Mr. Henry Erben, of this city. Its external dimensions are as follows: height, twenty-one feet; width, thirteen feet; and depth, seven. The design of the case, as will be perceived by the engraving which accompanies this notice, is Athenian Ionic, corresponding with the style of the church, and it is constructed of beautiful highly polished mahogany. It contains twenty stops, and one thousand and three pipes; has two key-boards, one for the great or full organ, and the other for the choir and swell; and pedals for the double octaves. Its cost was three thousand dollars. The bass tones are very heavy—perhaps too much so, in fact, for the size of the edifice, and the upper ones are exceeding sweet and mellow. The flute and clarionet stops, in particular, are perfect in the rich clearness of their tone. The organist appears to have a skilful and rapid hand for execution; but, if it were our province to do so, we



THE ORGAN.

would suggest to him a more judicious selection of stops, and less partiality for the great organ that he exhibited when we were present. The *power* of the instrument is a less desirable subject of display than the *sweetness*. In general, the "open diapason," "stopped diapason," "dulciana," "principal," and "flute" stops are quite sufficient for the ordinary purposes of church music, and the use of the other requires extreme good taste and judgment. For the transmission of sound, the construction of this church appears to be admirable; the voice of the preacher, even in its lowest tones, is heard with perfect distinctness in every part; but we are constrained to add, that an inconvenience results from this very quality, combined with an architectural peculiarity of the building. In order to gain sufficient extent for the grand portico in front, the architect has made the great door to open at once into the body of the church, without any intervening lobby; and as there always will be persons who, from necessity or negligence, come to church long after the commencement of the service, it follows that the congregation is almost constantly disturbed for nearly an hour, by the noises unavoidably made in opening and closing a door of such weight and magnitude; an inconvenience which can only be obviated by a small, light inner door, furnished with baize or padding, to deaden the sound created by its movements.

We have spoken of the first general effect to the eye, as being chaste and elegant; but we confess, that after a time it becomes somewhat unpleasant, from the prevalence of white; the walls, the pews, the ceiling, and the pillars are of that cold, trying hue—if hue it may be called; and it seemed, to us at least, that something less glaring for the eye to rest upon would be a great improvement; for example, if the pews were lined with a delicate shade of blue or green, or stained in imitation of maple or mahogany. We are aware that the object has been to secure harmony of effect with the Grecian character of the architecture, but we could be content to sacrifice that propriety for the relief to the eye that would be gained by a slight variety of colour.
New York Mirror.

MUSICAL TELEGRAPH.

M. Sudre, a Frenchman, is at present in the metropolis, for the purpose of unfolding to our government the details of a plan which he has proposed for telegraphic communication by means of musical notes. The plan has received in Paris the approbation of a committee of the French Academy, and a military and naval commission, who have reported favourably upon it, as likely to prove highly useful in establishing a communication between the different corps of an army, or vessels at sea. Its principal advantage is, that it may be employed in cases where the ordinary means are unavailable. From the experiments made by the commission of naval officers, it was found only to take two minutes to transmit, from one point to another, distant nine thousand feet, three orders taken from the book of signals. The French horn or trumpet, which can be heard at a distance of three miles, was the instrument used on this occasion; but any instrument, capable of expressing the different musical sounds, may be made the origin of the new language.—*English Paper.*

THE DRUIDS.

The religion of the ancient Britons was one of the most considerable parts of the government. Their priests, or ministers of religion, called Druids, possessed undoubted authority. The chief residence of the Druids was in the island of Anglesea, anciently called *Mona*. They were held in the highest esteem. They had the direction of every thing relating to religion, and the British youth flocked to them to receive instruction.

Their garments were remarkably long; and when employed in religious ceremonies, they always wore a white surplice. They generally carried a wand in their hands; and wore a kind of ornament enchased in gold about their necks, called the *Druid's egg*. Their necks were decorated with gold chains, and their hands and arms with bracelets. They wore their hair short, and their beards long and flowing.

They considered the oak as the emblem, or rather the peculiar residence of the Supreme Being. They performed their rites in woods or consecrated groves, and any one who entered these sacred recesses, carried with him a chain in token of his absolute dependance on the Deity. These groves were of different forms; some quite circular, others oblong; fenced round with stones and guarded by some inferior Druids, to prevent strangers from intruding into their mysteries.

Chaplets of oak were worn both by the Druids and the people in their religious ceremonies: the altars were strewn with its leaves, and encircled with its branches. Its fruit, especially the mistletoe, was thought to contain a divine virtue, and to be the peculiar gift of heaven. It was, therefore, sought for on the sixth day of the moon with great eagerness and anxiety, and when found, was hailed with the most rapturous joy, and by a solemn sacrifice. There were other and terrible superstitions connected with the Druidical belief. In the dark and mysterious recesses of their woods, human victims were frequently sacrificed to appease the anger of the Deity.

Though the sacred groves of the Druids have been destroyed, yet of the temples, and tables of stone which were enclosed within them, there are still many vestiges remaining. Of their temples, which consisted of two rows of lofty stones placed perpendicularly, that of Stonehenge offers the most astonishing ruins. The prodigious weight of the stones, placed on the top of the standing pillars, affords convincing proofs of astonishing progress in the mechanical arts at a very early period.

THE AMERICAN BLACK BEAR.

"This animal is found, in considerable numbers, in the northern districts of America. In size and form he approaches nearest to the Brown Bear; but his colour is a uniform shining jet black, except on the muzzle, where it is fawn-coloured; on the lips and sides of the mouth it is almost gray. The hair, except on the muzzle, is long and straight, and is less shaggy than in most other species. The forehead has a slight elevation, and the muzzle is elongated, and somewhat flattened above. The young ones, however, are first of a deep bright ash colour, which gradually changes into a deep brown, and ends by becoming a deep black.

"The American Black Bear lives a solitary life in forests and uncultivated deserts, and subsists on fruits, and on the young shoots of roots and vegetables. Of honey he is exceedingly fond, and as he is a most expert climber, he scales the loftiest trees in search of it. Fish, too, he delights in, and is often found in quest of it on the borders of lakes and on the seashore. When these resources fail, he will attack small quadrupeds, and even animals of some magnitude. As indeed, is usual in such cases, the love of flesh in him grows with the use of it.

"As the fur is of some value, the Indians are assiduous in the chase of the creature which produces it. About the end of December, from the abundance of fruits they find in Louisiana and the neighbouring countries, the bears become so fat and lazy that they can scarcely run. At this time they are hunted by the American Indians. The nature of the chase is generally this: the Bear chiefly adopts for his retreat the hollow trunk of an old cypress tree, which he climbs, and then descends into the cavity from above. The hunter, whose business it is to watch him into this retreat, climbs a neighbouring tree, and seats himself opposite to the hole. In one hand he holds his gun, and in the other a torch, which he darts into the cavity. Frantic with rage and terror, the Bear makes a spring from his station; but the hunter seizes the instant of his appearance, and shoots him.

"The pursuit of these animals is a matter of the first importance to some of the Indian tribes, and is never undertaken without much ceremony: a principal warrior gives a general invitation to all the hunters. This is followed by a strict fast of eight days, in which they totally abstain from food; but during which the day is passed in continual song. This is done to invoke the spirits of the woods to direct the hunters to the places where there are abundance of Bears. They even cut the flesh in divers parts of their bodies, to render the spirits more propitious. They also address themselves to the manes of the beasts slain in the preceding chases, and implore these to direct them in their dreams to an abundance of game. The chief of the hunt now gives a great feast, at which no one dare appear without first bathing. At this entertainment, contrary to their usual custom, they eat with great moderation. The master of the feast touches nothing; but is employed in relating to the guests ancient tales of feats in former chases; and fresh invocations to the manes of the deceased Bears conclude the whole.

"Then they sally forth, equipped as if for war, and, painted black; and they proceed on their way in a direct line, not allowing rivers, marshes, or any other impediment to stop their course, and driving before them all the beasts they find. When they arrive at the hunting ground, they surround as large a space as they can; and then contract their circle, searching at the same time every hollow tree, and every place capable of being the retreat of a bear; and they continue the same practice till the chase is expired."

THE GRIZZLY BEAR.

"Like the American Black Bear, this animal inhabits the northern part of America; but unlike him, he is perhaps the most formidable of all bears in magnitude and ferocity. He averages twice the bulk of the black bear, to which, however, he bears some resemblance in his slightly elevated forehead, and narrow, flattened, elongated muzzle. His canine teeth are of great size and power. The feet are enormously large; the breadth of the fore foot exceeding nine inches, and the length of the hind foot exclusive of the talons, being eleven inches and three quarters, and its breadth seven inches. The talons sometimes measure more than six inches. He is, accordingly, admirably adapted for digging up the ground, but is unable to climb trees, in which latter respect he differs wholly from every other species. The colour of his hair varies almost to an indefinite extent, between all the intermediate shades of a light grey and a black brown; the latter tinge, however, being that which predominates. It is always in some degree grizzled, by intermixture of grayish hairs, only the brown hairs being tipped with gray. The hair itself is, in general, longer, finer, and more exuberant than that of the black bear.

"The neighbourhood of the rocky mountains is one of the principal haunts of this animal. There, amidst wooded plains and tangled copses of bough and underwood he reigns as much the monarch, as the lion is of the sandy wastes of Africa. Even the bison cannot withstand his attack. Such is his muscular strength that he will drag the ponderous carcass of the animal to a convenient spot, where he digs a pit for its reception. The Indians regard him with the utmost terror. His extreme tenacity of life renders him still more dangerous; for he can endure repeated wounds which would be instantaneously mortal to other beasts, and, in that state, can rapidly pursue his enemy."

FALCONRY.

The birds known by the name of hawks or falcons, used formerly to afford a singular sort of amusement to persons who had time and riches at their disposal. This sport was called falconry or hawking. The birds were so trained, that they would rest upon their master's hand, till, at a given signal, they would fly away in pursuit of some poor little bird, who might be hovering near.

There are several species of hawks. The courage of these creatures in general was such, that no bird, not very much above their own size, could terrify them; their swiftness was so great, that scarce any bird could escape them; and their docility so remarkable, that they would obey not only the commands, but the signs of their master.

The falcon's most favourite sport is the pursuit of the heron, the kite, or the woodlark. These birds fly directly upwards, while their pursuer tries to rise above them. Thus both diminish from the view by degrees, till they are quite lost in the clouds. But they are soon seen descending, struggling together, and using every effort on both sides. The unequal combat is soon at an end, and the falcon is victorious.

For many years, no person of rank was represented without the hawk upon his hand, as a sign of dignity. In travelling, in visiting, and in affairs of business, the hawk still remained perched upon the hand. Ladies used also to have their hawks, and join in the amusements which they afforded.

The invention of gunpowder destroyed this sport, which was often cruel. When people could bring down the fowls of the air with a bullet, they did not need the assistance of the falcon or hawk. Falconry is now wholly out of fashion, but the hawks still pursue their sport, unaided by the cunning of man. I have sometimes seen them wheeling round and round over a brood of chickens, and suddenly clutch at one, and carry it off, the old hen in vain crying out, and the boys throwing stones to scare it from its plunder.

THE LANGUAGE OF SIGNS.

In the summer of 1818, a Chinese young man passed through Hartford, Connecticut. He was so ignorant of the English language, that he could not express in it his most common wants. As the Principal of the deaf and dumb asylum in that place, I invited the stranger to spend an evening within its walls, and introduced him to Mr. Laurent Clerc, the celebrated deaf and dumb pupil of the Abbe Sicard, and at that time an assistant teacher in the asylum. The object of this introduction was, to ascertain to what extent Mr. Clerc, who was entirely ignorant of the Chinese language, could conduct an intelligent conversation with the forefinger, by signs and gestures merely. The result of the experiment surprised all who were present. Mr. Clerc learned from the Chinese many interesting facts respecting the place of his nativity, his parents and their family, his former pursuits in his own country, his residence in the United States, and his notions concerning God and a future state. By the aid of appropriate signs, also, Mr. Clerc ascertained the meaning of about twenty Chinese words. When the conversation began, the stranger appeared bewildered with amazement at the novel kind of language which was addressed to him. Soon, however, he became deeply interested in the very expressive and significant manner which Mr. Clerc used to make himself understood; and, before one hour had expired, a very quick and lively interchange of thought took place between these so lately entire strangers to each other. The Chinese himself began to catch the spirit of his new deaf and dumb acquaintance, and to employ the language of the countenance and gestures with considerable effect to make himself understood.

About a year afterwards, the Principal of the asylum visited Cornwall, Connecticut, where upwards of twenty heathen youths were at that time receiving education under the patronage of the American Board of Commissioners for Foreign Missions. With the consent of the Principal of that institution, I gathered round me one evening several of these interesting strangers, from the islands of the South Sea, and from different tribes of the North American Indians. The object of the interview was, to ascertain how far a conversation could be conducted with them, merely by signs and gestures. The result was similar to that in the case of Mr. Clerc's intercourse with the Chinese. Questions were proposed to them on a variety of topics relating to their own individual history and that of their respective countries, and to their early religious knowledge.

For example, Thomas Hoppoo, a native of Owhyhee, was asked if his parents were living; how many brothers and sisters he had; when he left his native shores; whether his countrymen worshipped idols and sacrificed human victims; how the women were treated by the men; what was the climate of his country; what its productions; with many inquiries of a similar nature, all of which he comprehended, and to many of which he replied by signs. The meaning, too, of a number of Owhyhean words was ascertained, by signs merely, and found to correspond with the import which had been for some time preparing in the school; and, indeed, in a variety of instances, the most correct meaning of such words was established, by the medium of signs, in a more satisfactory way than had been previously attempted. Throughout this conversation, the heathen youths appeared to take a deep interest, and to have a peculiar aptitude in comprehending the signs which were proposed to them, and in inventing such as were necessary for a reply.

On the testimony of several of the South Sea islanders, it appeared that not a few of the signs employed in the instruction of the deaf and dumb, are precisely the same which their countrymen use to supply the deficiency of, or to give emphasis to their own comparatively barren language;—a fact which had indeed been anticipated, from the singular circumstance so often observed by the teachers of the deaf and dumb among their pupils, that mutes who meet for the first time are able to understand each other fully on many common topics; the Author of nature having laid the foundation in the very constitution of our species, and in the structure and processes of the visible creation, for a universal expression of the same ideas, on a vast variety of subjects, by similar signs.

Not long after this interview, Thomas Hoppoo visited the asylum for the deaf and dumb in Hartford. At my request, he attempted by the natural language of signs, such as his own feelings and conceptions at the time dictated, to give to a circle of pupils around him a sketch of his history. In doing this he occupied a half an hour or more, and secured the fixed attention and interest of the pupils. It was surprising to see the ingenuity and readiness with which he employed this language of signs and gestures, and, not less so, to ascertain, as I did afterwards, that a very considerable part of what he said, certainly more than half of it, was fully understood by those to whom it was addressed.—*Mr. Gallaudet, in the Lit. and Theol. Review.*

THE THIBET BEAR.

"The epithet prefixed to the name of this animal sufficiently indicates the country to which the creature belongs. The species, however, unless Cuvier and others are in error, is also to be found in Sumatra. It is particularly distinguished from the Malay and the large lipped bears by the thickness of its neck, and the flatness of its head. It has a compact body and heavy limbs, and its claws are little more than half as long as those of the other Indian bears. The ears are very large. The muzzle is moderately thick, and somewhat lengthened; the upper part black, with a slightly reddish tint on the sides, the edges of the lips flesh-coloured, and the hair smooth. From the back part of the head, however, the hair becomes shaggy. A uniform jet black is its invariable colour, except on the lower lip, which is white; and so also is a patch on the front of the neck, shaped like the letter Y, the oblique lines of which pass in front of the shoulders, while the lower line occupies the middle of the chest."

THE LARGE-LIPPED OR PETRE BEAR.

"This animal, which was first brought from India about forty years ago, was at first misnamed the Five-fingered, or Ursine Sloth. It has, however, nothing in common with the family of the sloths, but is a genuine bear. This curious quadruped is said to have been brought from the interior part of Bengal, where it burrows in the ground. It is covered with black, shaggy hair, which on the back is twelve inches long, where it divides and forms a kind of bunch. The hair on its head is short, and the snout is of a yellowish white. The tail is so short as to be scarcely visible. Its lips are thin and very long, and furnished with muscles, by which it can protrude them in a most singular manner. Its legs and feet resemble those of the common bear, and on each foot it has five long, crooked, white claws, which it uses either together or separately, like fingers, to break its food, and convey it to the mouth. It has no cutting teeth, but two very strong canine teeth, and six grinders in each jaw.

"It is a gentle but sluggish animal, and feeds on bread, fruit, nuts, honey, or fat, but refuses roots, and the lean and muscular parts of flesh. In general its motions are slow and languid; but when disturbed or irritated, it appears rather lively, and utters a kind of short, abrupt roar."

RICHARD LANDER.

The death of Richard Lander, the discoverer of the great geographical problem of the course of the Niger, has added another to the numerous victims who have perished in the attempt to explore the interior of Africa. Accounts brought by the last English packet state that he was murdered by the natives several hundred miles up the river, whither he had gone on a commercial expedition.

The history of African Discovery is a history of unexampled mortality. Since the first feeble attempts of the Portuguese and English trading Companies to penetrate into the interior, down through the numerous expeditions fitted out by the African Association, and the British Government, how few—two or three at the most—of the travellers have survived the journey. Not one has survived a second attempt.—Caille and John Lander are still living, though it would not be surprising if they should follow the example of their predecessors, and renew their efforts—to share a similar fate. With this fatal prospect before them, there have never been wanting persons ready to embark in the same undertaking. A more remarkable evidence cannot be found in history of the unconquerable spirit of enterprise, than the eagerness with which the places of the dead are filled up immediately by zealous competitors, at the risk of martyrdom in the cause of knowledge.

Our own countryman, Ledyard, was the first adventurer on this field, sent out after the establishment of the British "African Association." He arrived at Cairo in August, 1778, and died there shortly afterwards.

The next was a Mr. Lucas, who penetrated but a little distance, and returned to Tripoli, abandoning the expedition.

The third was Major Houghton, the British Consul at Morocco, who undertook to reach the Niger by the route of the Gambia. After being robbed by the Moors in the Great Desert, he was abandoned, and perished of hunger and fatigue, in 1791.

The celebrated Mungo Park followed. The story of his first voyage, which he commenced in 1795, is well known. He returned safe to England after an absence of three years. His second and fatal voyage commenced in 1805. The large expedition which he carried with him melted away before the pestilential influence of African climate. Of thirty-eight Europeans who started with him, five only were left, all sick, and one deranged, when he embarked on board of his canoe, in Nov. 1805, on his voyage down the Niger; after which he was no more heard of with certainty until the voyage of Clapperton and Denham ascertained the particulars of his murder.

The Association had in the mean time despatched other travellers into Africa;—Horneman, who perished in 1810, by disease, at a town on the Niger, and Mr. Nichols, who proposed to start from the Gulf of Benin, and died there of fever. A German named Roentgen was despatched in 1808, under the same auspices. He reached Mogadore, but was robbed and murdered a few miles from the place where he set out.

The narratives of Riley and Adams, both Americans, are next in order. They both survived slavery in Africa.

The expeditions sent out by the British Government were not more fortunate than those of the Association. A grand enterprise, fitted out in 1816, was divided into two parties, one to descend the Niger, and one to ascend the Congo,—the last commanded by Captain Tuckey, and the former by Major Peddie, with numerous attendants. Most of the officers of the Congo expedition perished. The captain, the zoologist, the botanist, the geologist, who accompanied it, fell successively. The other party fared no better. Major Peddie died early; his successor in command, Col. Campbell, soon followed; the third in command, Lieut. Stockoe, survived them only a few days. The miserable remains of the party returned in the fall of the year 1817.

The next enterprise was conducted by Messrs. Ritchie and Lyon. The former died at Fezzan, and the latter returned safe. Major Laing and Captain Gray had a little while before made short expeditions into the interior, and returned without loss of life.

The important expeditions of Denham and Clapperton, accompanied by Dr. Oudney and Mr. Toole, were next in point of time. The journal of their first voyage is familiar to most readers. Mr. Toole and Dr. Oudney died on that journey. Clapperton's second voyage was accompanied by Dr. Morrison and Captain Pearce. Their servant, Richard Lander, was the only survivor; the others died successively from the effects of the climate.

Major Laing, the next victim, was assassinated in the Desert.

The French traveller Caille was the immediate predecessor of the Landers on their first and successful journey. He returned in 1828. Their first journey was terminated in 1831. The second has added the name of Richard Lander to this long list of mortality. On looking over and marking with how few exceptions the attempts of all travellers have been fatal to them, one can but wonder at the pertinacious spirit with which the attempts are repeated.—*Balt. American.*

CHINESE FEMALES.

Pan-hwuy-pan, who is much admired as a historian, composed a book of instructions for her own sex, in which she treats of their proper station in society, the deportment they should exhibit, and the duties they ought to perform. She teaches them that they "hold the lowest rank among mankind, and that employments the least honourable ought to be, and in fact are their lot." She inculcates entire submission to their husbands, and tells them in very plain terms that they ought to become abject slaves in order to be good wives. We cannot expect that these doctrines, inculcated as they are by a *lady*, who ought to advocate the cause of her sex, and by one held in so high repute as is *Pan-hwuy-pan*, will be overlooked by the "lords of creation;" especially as they accord so perfectly with their domineering disposition in China.

Confucius, the prince of letters, *divorced his wife without assigning any cause for doing it;* and his followers have invariably adopted similar arbitrary measures in their treatment of the weaker sex. The price which is paid to the parents of the bride constitutes her at once a saleable commodity, and causes her to be regarded as differing little from a mere slave. In the choice of a partner for life, she acts only a passive part. She is carried to the house of the bridegroom, and there disposed of for life by her parents.

The birth of a female is a matter of grief in China. The father and mother, who had ardently hoped, in the unborn babe, to embrace a son, feel disappointed at the sight of a wretched daughter. Many vows and offerings are made before their idols in order to propitiate their favour and secure the birth of a son. The mercy of the compassionate Kwan-yin, especially, is implored to obtain this precious gift; but after they have spent large sums of money in this pious work, the inexorable goddess fills the house with mourning at the birth of a daughter. "Anciently," says Pan-hwuy-pan, "the female infant was thrown upon some old rags by the side of its mother's bed, and for three days was scarcely spoken or thought of. At the end of that time it was carried to the temple by the father, accompanied by the attendants with bricks and tiles in their hands." "The bricks and tiles," says Pan-hwuy-pan, in her comment on these facts, "signify the contempt and suffering which are to be her companion and her portion. Bricks are of no use except to form enclosures, and *to be trodden under foot;* and the tiles are useless except when they are *exposed to the* *inferior* of the air." The *Sheking*, one of the venerated ancient books, says:—

"——— When a daughter is born,
She sleeps on the ground.
She is clothed with a wrapper,
She plays with a tile.
She is incapable either of evil or good."

This last assertion is explained thus: "if she does ill, she is not a woman; and if she does well, she is not a woman; a slavish submission is her duty and her highest praise." At the present day, as well as anciently, the female infant is often an object of disgust to its parents, and of contempt to all the inmates of the family. As she grows up, her feet are so confined and cramped that they can never exceed the size of infancy, and render it impossible for her ever to walk with ease and safety. Small feet, that badge of bondage which deprives them of the power of locomotion, confines them to the inner apartments, except when poverty forces them to earn their livelihood abroad by labour, which they render exceedingly difficult and painful.

Females of the higher class seldom leave the house, except in sedan chairs. Their lives are but an honourable captivity. They have few or no real enjoyments; are ignorant of almost every thing—very few of them being able to read; and live and die little more than mere ciphers in human society. Pale and emaciated, these spend the greater part of their lives in embellishing their persons; while females of the poorer classes, whose feet are necessarily permitted to grow to the size which the God of nature designed, perform all the drudgery of husbandry and other kinds of work. These last are in general very industrious, and prove to be helpmates to their husbands. Being remarkable for their good and sound understandings, they manage their families with a great deal of care and prudence: and so far as industry and economy are concerned, they are exemplary mothers. Notwithstanding the degradation in which they are held, they are generally far superior in intellect to the common cast of Asiatic women. They are very ingenious in their needlework, and the like; and to be a good mother, in the estimation of this class of the Chinese, a woman must be a weaver. But it is to be regretted that they have very little regard for the cleanliness of either their persons or houses. Their children crawl in the dirt, and the few articles of furniture in their dwellings are covered with filth.

Infanticide of females is not unknown among the Chinese. They are far from regarding this crime with the horror it deserves. "It is only a female," is the answer generally given when reproved for it.

Chinese Repository.

MARRIAGE EXTRAORDINARY.

"At Otaheite, Society Islands, Capt. Charles Spooner, of whale ship Erie, of Newport, to Miss Kingatara Orureth."

We clip the above notice from one of our Eastern papers. Happily we have received from our attentive correspondents, (that is the phrase,) at Otaheite, an interesting account of the ceremonial.

The bride, Miss Kingatara Orureth, (says our correspondent) is the daughter of *Demelifrgwomldammfr*, one of the chiefs of the island, and is connected with most of the noble families of the kingdom. She is about sixteen years of age, of a bright mahogany colour, with her cheeks tattooed in the most lovely manner, and her ears slit in a style peculiarly fascinating. Her eyes are large, and of a greenish colour. Her lovely form, which was almost six feet six inches tall, was gracefully enveloped in an old blanket, and during the performance of the matrimonial rites, the fair bride stood before her happy lover modestly engaged in masticating sugar cane. The young lady is said to be highly accomplished; and delighted the company assembled on this solemn occasion, by an exhibition of her superior skill in swimming. The bridegroom is a hearty mariner of Newport. He was elegantly dressed for the occasion, in a blue jacket and white trousers. He swore that the lovely Kingatara alone was fit to share the hammock of a Yankee sailor; and said that if the masters complained that he was unskilful in his business, whaling, they could not deny that his wife, at least, is a *whaler*.—*Philad. Intel.*

JOHN HANCOCK.

John Hancock was born at Quincy, near Boston, in Massachusetts, in 1737. He graduated at Cambridge college in 1754, after which he became a merchant, under the patronage of his uncle, who adopted him, and left him heir to his princely fortune. A great crisis was now approaching in the affairs of the colonies, and Mr. Hancock became a politician. He was first elected a selectman of the town of Boston, at that time a dignity second to none in the gift of a free people. He was next sent to the general assembly of the commonwealth, where by his urbane and gentlemanly behaviour he acquired an extensive popularity. In 1774, he delivered an oration on the massacre of 1770, which, from the bold and daring manner in which he spoke, considerably raised his reputation. Soon after this, he was president of the provincial congress; and, the next year, was made president of the continental congress at Philadelphia. He presided over that body with impartiality and dignity, and was the first signer of the Declaration of Independence. When Mr. Hancock retired from the continental congress, he did not leave public life; for he was a member of the convention that formed the constitution of Massachusetts, under which he was elected governor, from 1780 to 1793, with the exception of one year, when he declined a re-election. The person of Mr. Hancock was fine, his manners elegant, and his hospitality unbounded. He died of the gout, which was hereditary in his family, the 8th of October, 1793, in the 55th year of his age.

POETRY.

SUMMER EVENING AT A SHORT DISTANCE FROM THE CITY.—Alonzo Lewis.

And now the city smoke begins to rise,
And spread its volumes o'er the misty sea;
From school dismissed the barefoot urchin hies
To drive the cattle from the upland lea.
With gentle pace we crossed the polished beach,
And the sun sets as we our mansion reach.

Then come the social joys of summer eve,
The pleasant walk along the river-side;
What time their tasks the weary boatmen leave,
And little fishes from the silver tide,
Elate with joy, leap in successive springs,
And spread the wavelets in diverging rings.

High overhead the stripe-winged nighthawk soars,
With loud responses to his distant love;
And while the air for insects he explores,
In frequent swoop descending from above,
Startles with whizzing sound the feeble wight
Who wanders lonely in the silent night.

Around our heads the bat, on leathern wings,
In airy circles wheels his sudden flight;
The whippoorwill in distant forests sings
Her loud unwearied song; and o'er the night
The brooding owl, upon the evening gale,
Sends forth her wild and melancholy wail.

The first sweet hour of gentle evening flies,
On downy pinions, to eternal rest;
Along the vale the balmy breezes rise,
Fanning the languid boughs; while in the west
The last faint streaks of daylight die away,
And night and silence close the summer day.

SECTION XV.

HISTORY.

EGYPT.

In the days of discovery and research, *Egypt and its Antiquities* have received no small share of attention from travellers, and from those who, in the spirit of quiet and earnest investigation at home, are still throwing light on what has hitherto been obscure. Though it would be idle to deny the learning of the Egyptians, it has been very much like a sealed book, with regard to whose contents conjecture has been thoughtfully employed. Judging, however, of the mighty undertakings of that extraordinary people, from what we now see of their relics, but left in the dark as to the mode in which they executed their operations on so grand a scale, we may fairly conclude, that certain inventions and improvements in arts and manufactures, which we call modern, were practised by them; and that on the other hand, many valuable attainments familiar to the Egyptians, have become, by lapse of years, wholly forgotten, and are therefore concealed from us.

ANCIENT THEBES AND ITS TEMPLES.

The city of Thebes was, perhaps, the most astonishing work ever performed by the hand of man. Its ruins afford the most positive proof of the ancient civilization of Egypt. The origin of this famous place is lost in the obscurity of time, it being coeval with the nation which first took possession of the country. Its extent was vast; though its hundred gates, immortalized by Homer, and often interpreted as the gates of the city, may possibly have been the gates of the temples, or of the palaces of its princes. D'Anville and Denon state its circumference to have been thirty-six miles; its diameter not less than ten and a half. The number of inhabitants was in proportion to these dimensions. Diodorus says, that the houses were four and five stories high. Although Thebes had greatly fallen from its former splendour at the time of Cambyses the Persian, it was the fury of this merciless conqueror that gave the last blow to its grandeur, about 250 years before the Christian era. He pillaged its temples, and carried away the ornaments of gold, silver, and ivory. Before this period, no city in the world could be compared with it in size, beauty, and wealth; and according to the expression of Diodorus, The sun had never seen so magnificent a city.

The temple of Karnac, the most considerable monument of ancient Thebes, was not less than a mile and a half in circumference. It is not intended here to furnish an account of this extraordinary building, from the still mighty ruins of which we may gather evidence of what it once was; but we may observe, as the most striking circumstance connected with the place, that a portion of the structure is considered to be more than four thousand years old, or 2272 years before the coming of Christ.

Speaking of this magnificent edifice, and of the enormous sphinxes and other figures, into an avenue of which he had entered, Belzoni says in his enthusiastic style:—"I was lost in a mass of colossal objects, every one of which was more than sufficient of itself to attract my whole attention. I seemed alone, in the midst of all that was most sacred in the world; a forest of enormous columns, adorned all round with beautiful figures and various ornaments from top to bottom; the graceful shape of the lotus which forms their capitals, and is so well proportioned to the columns; the gates, the walls, the pedestals, the architraves, also adorned in every part with symbolical figures in low relief, representing battles, processions, triumphs, feasts, and sacrifices, all relating to the ancient history of the country; the sanctuary wholly formed of fine red granite; the high portals, seen at a distance from the openings of this vast labyrinth of edifices; the various groups or ruins of the other temples within sight: these altogether had such an effect upon my soul, as to separate me in imagination from the rest of mortals, exalt me on high above all, and cause me to forget entirely the trifles and follies of life. I was happy for a whole day, which escaped like a flash of lightning."

"It is absolutely impossible," again exclaims the same indefatigable traveller, in describing his visit to another temple, (Luxor,) "to imagine the scene displayed without seeing it. The most sublime ideas that can be formed from the most magnificent specimens of our present architecture, would give a very incorrect picture of these ruins. It appeared to me like entering a city of giants, who after a long conflict were all destroyed, leaving ruins of their various temples as the only proof of their former existence."

So far Belzoni: and in this he is borne out by the learned Frenchman, Champollion, who speaks of Thebes in terms of equal admiration:—"All that I had seen, all that I had learned on the left bank, appeared miserable in comparison with the gigantic conceptions by which I was surrounded at Karnac. I shall take care not to attempt to describe any thing; for either my description would not express the thousandth part of what ought to be said, or if I drew a faint sketch, I should be taken for an enthusiast, or perhaps for a madman. It will suffice to add, that no people, either ancient or modern, ever conceived the art of architecture on so sublime and so grand a scale, as the ancient Egyptians. Their conceptions were those of men a hundred feet high."

After Karnac and Luxor, the next grand building at Thebes was Memnonium; that is the tomb or palace of one of the Pharaohs, whom the Greeks supposed to be the same as Memnon. In the middle of the first court was to be seen the largest figure ever raised by the Egyptians—the statue of the monarch, seventy-five feet high. Behind it, there was an entrance which led into a second court, surrounded by porticoes supported by fifty other colossuses; and at the end of several porticoes and different apartments was the celebrated library, at the entrance of which was an inscription, signifying, "The medicine of the mind."

Belzoni, in his travels, gives a most interesting account of his discovering and opening the great tomb of Psammuthus at Thebes. He made on the spot drawings of all the figures, hieroglyphics, and ornaments in the sepulchre, and took impressions in wax—a most laborious task, which occupied him more than a twelvemonth. The personal vigour of this enterprising traveller, guided by uncommon intelligence and energy, enabled him to accomplish objects which had before never been thought of, or had been attempted in vain. On his arrival in England, he constructed, and exhibited, a perfect fac-simile of the tomb, which some of our readers will, doubtless, recollect having seen.

THE ALABASTER SARCOPHAGUS.

It was in the tomb of Psammuthis, in the centre of the saloon, that Belzoni found the beautiful Alabaster Sarcophagus. This magnificent remnant of ancient days, which, most probably, once contained a royal mummy, has not its equal in the world. It is of the finest Oriental alabaster, nine feet five inches long, and three feet seven inches wide; and, though of considerable thickness, is highly transparent: this may be proved on placing a light within. It is minutely and richly sculptured, inside and outside, with several hundred figures, of about two inches high, and at the bottom, within, is a graceful form, carved in outline, of the human shape and size, supposed to represent one of the numerous deities worshipped by the nations of early Egypt. This rich treasure is in the possession of Sir John Soane, in his Museum in Lincoln's Inn Fields, and remains altogether unrivalled in beauty and curiosity.

In considering these astonishing works, we can scarcely doubt the deserved eminence of the ancient Egyptians in the arts and sciences. Indeed, some of the most illustrious characters of Greece; Homer, Pythagoras, Plato, Lycurgus, and Solon, are said to have travelled hither to complete their studies, and to draw from that source whatever was most valuable in every kind of knowledge. But the Holy Scriptures themselves have incidentally given this testimony, when they speak of Moses as being learned *in all the wisdom of the Egyptians, and mighty in words and deeds.* (Acts vii. 22.) Yet we wonder how the history of a people, which was once so great as to erect these mighty edifices, could be so far obscured, that even their language and method of writing are in a great degree unknown to us.

HIEROGLYPHICS.

Much has indeed been done of late, in deciphering Hieroglyphics; and with the knowledge of them which is now gained, it may be hoped, that ere long, this picture-language of ancient Egypt may be read with correctness and certainty. The labours of M. Champollion in this department are well known. Among Englishmen, Mr. Wilkinson, an intelligent traveller, who has examined the tombs in Thebes, has pursued the subject with perseverance, and a gratifying degree of success. It was clear, that no master-key to those hidden stores could be obtained, unless some ancient inscription were found, written in Hieroglyphics, as well as in some known language. Now, it so happens, that a stone of this kind actually exists among us; the celebrated Rosetta stone, found by the French in digging for the foundation of Fort St. Julian, near Rosetta. It is a large black stone, containing three inscriptions of the same import; namely, one in hieroglyphics, another in the ancient and common characters of the country, and another in Greek. Though imperfect, the stone being broken, the writing is sufficiently ample to form a most valuable guide in further researches. The visiter to the British Museum may see in the ninth room, No. 65, this invaluable specimen, which records a decree of the Egyptian priests, in honour of Ptolemy Epiphanes; the leading events of his reign; his liberality to the temples; his conquests over certain rebellious subjects, his clemency towards some of the traitors; the measures he took against the fatal consequences of an excessive inundation of the Nile, and his generosity towards the College of the Priests. Proceeding upon this and other documents, Champollion published in 1824 his *Precis du Systeme Hieroglyphique*, a work of high interest and value, as affording light on some of the most intricate points that can engage the attention of the antiquary.

SCULPTURE.

But our admiration of ancient Egyptian skill will increase, when we take into account the nature of the materials on which they worked, in raising their temples, obelisks, and statues. The stones, particularly the granite and the breccia, are extremely hard, and we do not know with what tools they were cut. The tools of the present day will not cut granite without much difficulty; and there is a great doubt whether we could give it the fine smooth surface, and sharp clear edge, which we see so perfect in these ancient remains, some of which, in this respect, may be said to look as if they had been finished but yesterday. For an illustration of this, we may refer our readers to an admirable specimen of Egyptian sculpture in the British Museum, ninth room, No. 66. It consists of the head, and upper part of the body, of a colossal figure, brought from the Memnonium, and thence probably called, by mistake, the "Younger Memnon;" while the statue of the genuine Memnon, famous for his concert of *Music at sun-rise*, still exists at Thebes. The fragment, however, to which we have adverted, is well worthy of inspection, conveying a remarkable instance of preservation as a relic of art, and, at the same time, of the simple and pleasing expression of the Egyptian countenance.

AN ANCIENT VESSEL.

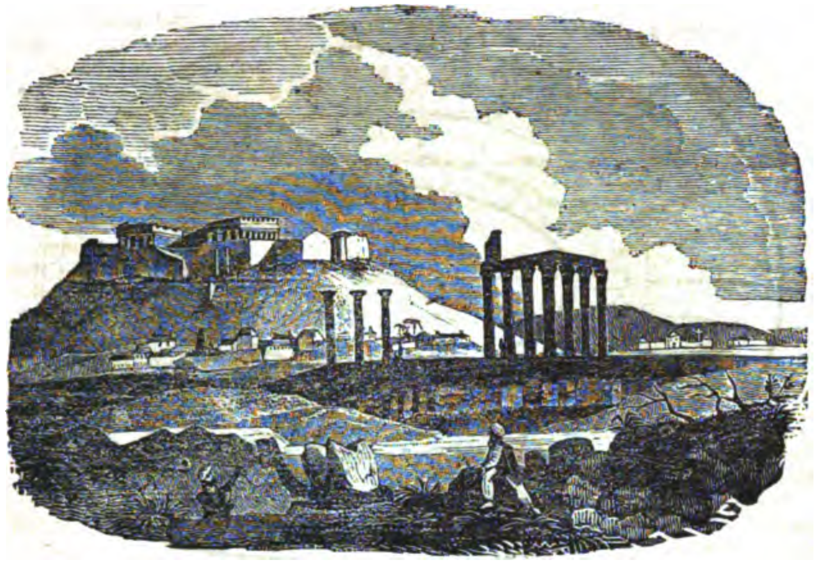
In making a new sluice to the citadel of Calais, an ancient vessel, 45 feet in length, 12 in breadth, and 8 in depth, was discovered in the ground; it is strongly built, though the measurement does not exceed 80 tons, and has evidently never been covered with a deck. Coins were found in it with the date of 1219, and, as it lay 12 feet below the foundation of the inner wall of the fortifications erected by the Count de Boulogne, it is to be presumed, that the vessel was not discovered at that period. It cannot be ascertained whether it was ever at sea—but there is reason to believe it was erected before Calais was made a regular port, and when the sea ran far up the present land.—*Paris Advertiser.*

EFFECTS OF LIGHTNING.

A labouring man, finding himself overtaken by a storm in the wood of Mareuil, imprudently sheltered himself under a tree; the lightning struck the tree, and shivered a part of it to atoms. The man did not at first feel any ill effects from it, although his clothes were torn, and pieces of his waistcoat, blouse, and shirt, had been carried to a considerable distance. His right eyebrow was burned, and the epidermus of that side was either torn from him, or stuck to what remained of his clothing. As soon as the storm had ceased, he left his shelter—but the first movement brought back sensibility, and he with difficulty reached a house, where he discovered the full extent of the injury he had received.—*Journal de l'Oise.*

BUSINESS.

Business, says a celebrated writer, is the salt of life, which not only gives a grateful smack to it, but dries up those crudities that would offend, preserves from putrefaction, and drives off all those blowing flies that would corrupt it. Let a man be sure to drive his business, rather than let it drive him. When a man is but once brought to be driven, he becomes a vassal to his affairs. Reason and right give the quickest despatch. All the entanglements that we meet with arise from the irrationality of ourselves or others. With a wise and honest man a business is soon ended, but with a fool and knave there is no conclusion, and seldom even a beginning.



MODERN ATHENS.

Athens as it once was—The Parthenon—The Temples—Columns of Adrian—Athens *as it now is*—Account of the Ruins.

Ancient Athens was divided into the Acropolis, or upper, and the Catapolis, or lower city. The former contained the most splendid works of art, of which Athens could boast. Its chief ornament, however, was the PARTHENON, or *temple of Minerva.*

This magnificent building, which even in ruins has been the wonder of the world, was 217 feet long, 98 broad, and 65 high. Destroyed by the Persians, it was rebuilt in a noble manner by Pericles, 444 years before Christ. Here stood the statue of Minerva, formed of ivory, 46 feet high, and richly decorated with gold to the value of more than $520,000.

The *Propylæum*, built of white marble, formed the entrance to the Parthenon. This building lay on the north side of the Acropolis, close to the Erectheum, also of white marble, consisting of two temples; besides another remarkable building, called the *Pandroseum*. In the circle of Minerva's temple stood the olive tree, sacred to that goddess.

On the front part of the Acropolis, and on each end, were two theatres, built with extraordinary splendor.

In the lower city were the Poikile, or the gallery of historical paintings, the temple of the Winds, and the monuments of celebrated men. But the greatest pieces of architecture were without the city. These were the temples of Theseus and Jupiter Olympus; one on the north, and the other on the south side of the city.

The temple of Theseus resembled the Parthenon. On this temple, the famous deeds of old heroes and kings were represented. The temple of Jupiter Olympus surpassed all the other buildings of Athens in splendor and beauty. Incalculable sums were spent on it. It was finished by Adrian. The outside of this temple was adorned by 120 fluted columns, 60 feet high, and 6 in diameter. The inside was more than half a league in circumference. Here stood the statue of the god made by Phydias, of gold and ivory.

In the fifth century, the Parthenon was turned into a church of the Virgin Mary. In 1456, when Athens fell into the hands of the Turks, it became a mosque.

This is a brief account of Athens, *as it once was*. Now, under the dominion of the Turks, and after 2300 years of war and devastation, how changed! Still its ruins excite astonishment.

The Turks have surrounded it with a broad irregular wall. With this wall are remains of some of the pillars of the ancient buildings. Among these are six whole columns of the Propylæum with gateways between them, eight front columns of the Parthenon,* and several colonnades. Of all the statues with which the Parthenon was adorned, we find only that of Adrian. There are also remains of the temple of Neptune, the Poikile, and the temple of the Winds; and without the city, of Jupiter Olympus, and the temple of Theseus.

On the hill (Mars Hill) where the court of the Areopagus held its sittings, we find steps hewn in the rock, and places for the judges to sit, as well as for the accusers and the accused. This hill is now a Turkish burying ground. The Pnyx, the place of assembly for the people, is still to be seen, with the place hewn in the rock from which the orators spoke; also the seats of the scribes and officers. The paths for running, where the gymnastic exercises were performed, are yet visible.

ROYAL PASTIME EXTRAORDINARY.

At the Adelaide street Gallery, London, is exhibited a very remarkable stick or weapon recently brought from Portugal, and which belonged to Don Miguel, whose amusement it was to carry it with him when he rode out, for the purpose of killing dogs, and wounding any of his subjects whose demeanor did not appear to him sufficiently humble and submissive. It is about five feet long, of very tough wood, apparently a species of thorn, with a mounting of brass at each end, and the larger end loaded with iron. Miguel carried it between his leg and the saddle, and it bears the marks of the friction thus produced. A piece of thick tape is passed through a hole at the small end, which he put round his wrist when he struck with it, to prevent its slipping or being wrested out of his grasp. A more formidable instrument of the kind can hardly be imagined; and it is said to have been made after instructions given by himself. Its genuineness is believed to be perfectly well established.

When nations can subdue their enemies by kind treatment, the instruments of war may be destroyed.

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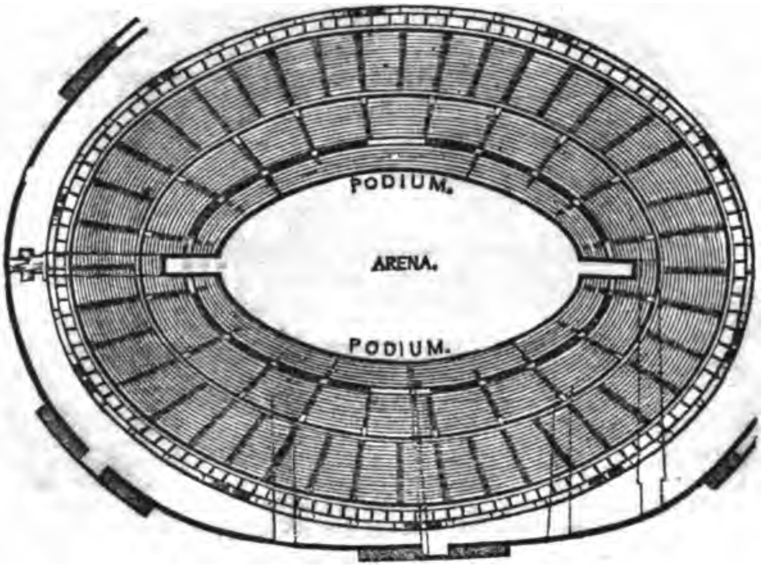
* These eight columns of the Parthenon, are seen in the engraving, at the righthand.



AMPHITHEATRE AT POMPEII.

You have heard of the ancient city of Pompeii, I suppose; how in about 50 years after the death of our Saviour, during a terrible irruption of Mount Vesuvius, it was so completely buried under a shower of stones and cinders, that the place where it stood was hardly known, till the year 1755. You have, perhaps, read about its being excavated, since that time; and what curiosities have been found.

Among the rest are the remains of the ancient theatres, and amphitheatres. The latter were oval buildings, in the centre of which, public amusements were held, and round the outside were seats for the spectators. There were ranges or rows of seats, one above another.

The engraving is a plan of the amphitheatre at Pompeii. It had seats enough to accommodate more than 10,000 people, besides room for many to stand. It was 430 feet long and 335 broad.

You will find the word *Podium* twice repeated, in the engraving. It refers to the parapet or elevation, on which seats were placed. The *Arena* is the part of the amphitheatre where the amusements or combats took place.

Pompeii was about twelve miles S. E. of Naples. The city was built of volcanic matter, thrown out of Vesuvius; and the streets paved with lava. Herculaneum, another city not far distant, was overwhelmed at the same time with Pompeii, and has recently been excavated in a similar manner.

SAYINGS OF THE ANCIENTS.

When Ptolemy the Second, king of Egypt, looked forth one day from his palace window, afflicted as he was at the time with the gout, the consequence of his luxurious indulgences, and distracted with kingly anxieties, he observed a multitude of his poorer subjects reclining in festal ease on the sandy banks of the Nile—"Miserable fate," said the monarch, "that my fate hath not allowed me to be one of them."

Anaxagoras, the Clazomenian philosopher, and preceptor of Socrates, being asked for what purpose he conceived he had come into the world, answered, "To see sun, moon, and stars!" The same philosopher being utterly negligent regarding the politics of his town of Clazomene, was twitted for his indifference on that subject by some of his most zealous fellow-citizens, who asked him whether he entertained no concern for his native country? "For my country," replied the sage, "I have always a great concern. My native city," pointing to the heavens, "is perpetually the subject of my thoughts."

Chilon, the sage of Sparta, inquired of Æsop what was Jupiter's employment—what was his regular daily business in the skies? "To humble those that are elevated, and elevate those that are humble," said the fabulist.

Anacharsis, though a Scythian, uttered sentiments as beautiful as those of Plato himself. Among his fine sayings is the one—"The vine bears three grapes: the first is that of pleasure; the second is that of drunkenness; the third is that of sorrow." A certain Greek poet, in a very ingenious distribution, gave the first bowl, or crater, to the Graces, Hours, and Bacchus; the second to other heathen deities; the third to Mischief.

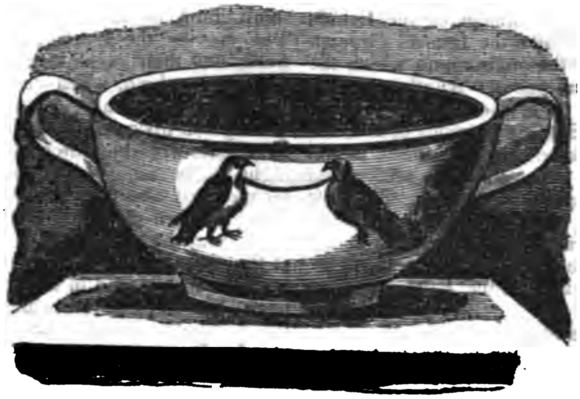
When Mark Antony was fast fleeing from his conqueror, after the battle of Mutina, one of his acquaintances gave as a reply to some person that inquired of him what his master was about, "He is doing what dogs do in Egypt when pursued by the crocodile—drinking and running."

Cresus, king of Lydia, who felt presumptuously proud on account of his power and his riches, had dressed himself one day in his utmost splendor of apparel and royal ornament, and, seating himself on his throne, exhibited his person to Solon, as comprehending within itself the substance and sun of all worldly glory. Have you ever beheld," said he to the Grecian sage, "a spectacle more august?" "I have," was the answer: "their is neither a pheasant in our fields, nor a peacock in our court-yard, nor a cock on our dunghill, that does not surpass you in glory."

Chambers' Edinburgh Journal.

ATHENIAN SOUP.

The Athenians sometimes had their soups served up in the stewing-pans in which they were made. The form of these utensils resembled that of our tureens, and the material was a kind of porcelain. It appears also from Plato that the spoons were of sycamore, as that wood was thought to communicate a better scent and flavor to the soups.



THE WASSEL CUP.

And what about the Wassel Cup? you will perhaps ask. Why, there is a story in Hone's Every Day Book about the Saxons, and the British king Voltigern, and Rowena, and the wassel cup; but we never found it interesting enough to be worth reading through, and we doubt whether it would please our readers any better.

The picture, however, at the beginning of the story, has so odd an appearance, that we have ventured to show you that. The birds are two hawks, with a string fastened to the necks of each other. It seems that this wassel cup, was a famous bowl which the Saxons used on New Year's day, as they assembled with their neighbours around their glowing hearths to converse together and sing songs; and that as the bowl went round, filled with apples or some rarity, every guest, as he took any portion of the contents of the bowl into his hand, said *Wassel.*

Some oldfashioned poet, in allusion to this custom, has made the following

SONG.

Good Dame, here at your door,
  Our Wassel we begin;
We are all maidens poor,
  We pray now let us in,
    With our Wassel.

Our Wassel we do fill
  With apples and with spice,
Then grant us your good will
  To taste here once or twice,
    Of our good Wassel.

If any maidens be,
  Here dwelling in this house,
They kindly will agree
  To take a full carouse
    Of our Wassel.

THE BUSTARD.

This is among the largest of land birds. Some of the males weigh from 25 to 30 pounds. It is found in different parts of Europe, Asia, and Africa.

The Bustard frequents vast plains, has a long neck, long legs, and feet well adapted to running. It travels, or rather runs, with very great swiftness. Some have been ready to class it with the ostrich, to which it certainly has a slight resemblance, in its shape and mode of travelling. The colour, however, is different. The head and neck are of a pale, ashy hue; the breast and belly white; the back, wings, and tail are marked with dashes of deep brown and black, on a polished nut-coloured ground. A tuft of long feathers grows from each side of the lower mandible.

The male is furnished with a most singular sack or pouch, situated in the front part of the neck, the entrance to which is under the tongue. It is capable of containing two quarts of water; some say more. It is supposed that in traversing those open plains, in which it delights to roam, it supplies itself with water from this reservoir. Perhaps, too, it supplies the female with drink while sitting; or the young ones, before they are able to reach the distant ponds.

The female is but about half as large as the male. She lays her eggs in a hole in the ground. They are usually two in number.

THE ARROWS, NEAR BOROUGHBRIDGE, YORKSHIRE.

These are three large obelisks, standing about half a mile southwest of Boroughbridge. They are irregular in form, and greatly worn by exposure to the weather, and are of very ancient origin. In the time of our famous antiquary Leland, who began his travels through England in 1536, there were four of these stones, but one has since fallen, or been pulled down. The three now remaining, stand nearly in a line from north to south. The northernmost obelisk is eighteen feet high, and is supposed to weigh thirty-six tons; the centre stone, twenty-two feet and a half high, is also thought to weigh thirty tons.

These extraordinary monuments of antiquity did not escape the notice of the greatest of all English antiquaries, Camden, who visited Yorkshire in 1582, and who imagined that they were compositions of sand, lime, and small pebbles, cemented together. He was probably deceived by their vast bulk, not conceiving it possible for human art to bring such masses of stone, each being a single block, from any long distance. But it is now well known that they are natural stones, of a kind common in the north of England, called the coarse rag-stone, or millstone grit; and it is fair to conclude, that they were brought from a quarry at Plumpton, near Harrowgate. Hargrove, in his *History of Knaresborough*, in describing Plumpton, says, " One huge mass of rock, insulated by water, which measures nearly fifty feet in length, without a joint, shows the possibility of finding obelisks here, even higher than those at Boroughbridge, which are believed to have been carried from hence, as being of the same grit."

In the year 1709, the ground about the centre obelisk was opened to the width of nine feet. At first, a good soil was found, and at about a foot deep was a quantity of rough stones and large pebbles; layers of these appeared, which were probably placed there, to keep it steady; beneath, was a strong and hard clay, supporting the bottom of the obelisk, at above six feet below the surface of the earth. It has never been determined by what people or for what object these stones were erected, although the point has engaged the attention of many ingenious men. Stukeley's idea is, that they were fixed by the *Britons*, long before the time of the Romans; he imagines, that in this place the Druids held a great yearly festival, like the famous Grecian games, and that these were the goals round which the chariots were turned at the races. Another author suggests that they were set up by the early Britons to the honour of their gods. But the opinions of Leland, Camden, and Drake, seem to be better founded; namely, that they were the work of the *Romans*, and raised to commemorate some important victory. The last mentioned writer remarks: "The foundations of these stones being laid with the same clay and pebble as the walls of Aldburgh, the ancient Isurium of the Romans, is a convincing proof of their being Roman monuments."

Aldburgh is not a mile and a half distant from Boroughbridge, and when, in addition to the fact stated by Drake, we consider the facilities possessed by the Romans for conveyance on their great military road, together with their fondness for raising records to their own honour, we cannot but consider them as belonging to the Romans. It is true that they bear no marks of Roman elegance, nor the traces of any inscription: yet these, if any such existed, may probably have been worn away by time and the weather. Dean Gale had a notion that they were originally those Mercuries described by the ancients, which were usually placed where four ways met, (as they did here,) and that the head on the top of the stones had been displaced. Amidst so many theories on the subject of the Arrows, or Boroughbridge Obelisks, we will leave those of our readers, who are curious in such matters, to consult the authorities quoted; and, notwithstanding the title by which these stones are commonly known in the country, (the devil's arrows,) we are sure that they will agree in rejecting *one* ancient opinion quaintly enough adverted to by Camden in his *Britannia*. "As for the silly story of their being those bolts which the devil shot at some cities hereabouts, and so destroyed them, I think it not worth while to mention it."

At Rudston, about five miles from Bridlington, in the same county, is a similar obelisk, upwards of twenty-nine feet high. Its depth in the ground has been traced more than twelve feet, without coming to the bottom. It stands forty miles from any quarry where this sort of stone is found, and neither history nor tradition has any record either of its date or of the cause of its erection.—*London Saturday Magazine.*

MYTHOLOGY.

PYMALION, OR PYGMALION.

"Pymalion, a statuary, considering the great inconveniences of marrying, had resolved to live single; but afterwards making a most elegant and artificial image of Venus, he fell so much in love with his own workmanship that he begged Venus to turn it into a woman, and enliven the ivory. His wishes were granted, and of her he had Paphos, from whom the island Paphos had its name."

PYRAMUS AND THISBE.

"Pyramus and Thisbe were both inhabitants of the city of Babylon; equal in beauty, age, condition, and fortune. They began to love each other from their cradles. Their houses were contiguous, so that their love arose from their neighbourhood, grew greater by their mutual play, and was perfected by their singular beauty. This love increased with their years, and in due time, they begged their parents' consent; which was refused, because of some former quarrels between the two families. And that the children might not attempt any thing against their parents' will, they were not permitted to see each other. There was a partition-wall between both houses, in which wall there was a small chink, never discovered by any of the servants. The crevice the lovers found, and met here: their words and their sighs went through, but kisses could not pass; which, when they parted, they printed on each side of the wall. By some contrivance they met, and agreed upon an interview under the shade of a large mulberry tree, which stood near a fountain. When night came on, Thisbe deceived her keepers, and escapes first, and flies into the wood; for love gave her wings. When she got to the appointed place, a lioness, fresh from the slaughter of some cattle, came to drink at the fountain. Thisbe was so frightened that she ran into a cave, and in her fright her veil fell from her head; the lioness returning from the fountain, found the veil, and tore it with her jaws besmeared with blood. Pyramus comes next, and sees the print of a wild beast's foot, and finds the veil of Thisbe bloody and torn. He, imagining that she was killed and devoured by the wild beast, grew distracted, and hastened to the appointed tree; but not finding Thisbe he threw himself upon his sword and died. Thisbe in the meantime recovered from her fright, came to the mulberry tree, where she saw Pyramus in the struggles of death; she embraced her dying love, mingled her tears with his blood, and folding her arms about him, called upon him to answer her, but he was speechless, and looking up, expired. Thisbe, distracted with grief, tore her cheeks, beat her breast, rent her hair, and shed a deluge of tears upon his cold face; nor did she cease to mourn, till she perceived her veil, bloody and torn in Pyramus's hand. She then understood the occasion of his death, and drew the sword from the body of her lover, plunged it into her own, and falling accidentally on him, gave him a cold kiss, and breathed her last breath into his bosom. The tree, warmed with the blood of the slain lovers, became sensible of their misfortune, and mourned. Its berries, which were before white, became red with grief, and blushed for the death of Pyramus; when Thisbe also died, the berries then became black and dark, as if they had put on mourning."

ATALANTA AND HIPPOMENES.

In the next place hear the story of Atalanta and Hippomenes. She was the daughter of the king Schæneus, or Cæneus. It was doubted whether her beauty or swiftness in running were greater. When she consulted the oracle, whether she should marry or not, this answer was given, "That marriage would be fatal to her." Upon which the virgin hid herself in the woods, and lived in places remote from the conversation of men. But the more she avoided them, the more eagerly they courted her; for her disdain inflamed their desires, and her pride raised their adoration. At last, when she saw she could not otherwise deliver herself from the importunity of her lovers, she made this agreement with them: "You court me in vain; he who overtakes me in running shall be my husband; but they who are beaten by me shall suffer death; I will be the victor's prize, but the vanquished's punishment. If the terms please, go with me into the field." They all agreed to these conditions:

All her mad wooers take the terms proposed.

"They strove to outrun her; but they were all beaten and put to death according to the agreement; suffering the loss of their lives for the fault of their feet. Yet the example of these lovers did not deter Hippomenes from undertaking the race, who entertained hopes of winning the victory, because Venus had given him three golden apples, gathered in the gardens of the Hesperides, and also told him how to use them. Hippomenes briskly set out and began the race; and when he saw that Atalanta overtook him, he threw down a golden apple: the beauty of it enticed her so that she went out of her way, followed the apple, and took it up.

"She, greedy of the shining fruit, steps back
To catch the rolling gold."

"Afterwards he threw down another, which she pursued also to obtain; and again a third; so that while Atalanta was busied in gathering them up, Hippomenes reached the goal, and took the lady as the prize of his victory. But forgetful of the gratitude and respect due to Venus, he met with a signal punishment. Himself and Atalanta were turned into a lion and lioness."

CACUS.

"Cacus, so called from his wickedness, tormented all Latium with his fires and robberies, living like a beast in a dismal cave. He stole Hercules's oxen, and dragged them backward by their tails into his cave, that the track of their feet might not discover this repository of his thefts. But Hercules passing by heard the lowing of the oxen in the cave, broke open the doors, and seizing the villain, put him to death. His cave was so dark, that it admitted not the least ray of light; the floor of it was red with the blood perpetually shed upon it, and the heads and limbs of the men he had murdered were fastened to the posts of the doors."

CÆCULUS.

"Cæculus also lived by plunder and robbery. He was so called from the smallness of his eyes: it is thought the noble family of the Cæcilii at Rome derived their origin from him. He was the founder of the city Præneste. Others say, that the shepherds found Cæculus unhurt in the midst of the fire, as soon as he was born; from which he was thought to be the son of Vulcan."

POLYPHEMUS.

"To these two servants and sons of Vulcan, add the shepherd Polyphemus, a monster not unlike them, born of Neptune. For he had but one eye in his forehead. like the Cyclops, and he procured his living by murders and robberies, like Cacus and Cæculus. This monster drew Ulysses and some of his companions into his den in Sicily and devoured them. He thought, too, that the rest of Ulysses's servants could not escape his jaws. but Ulysses made him drunk with wine, and then with a firebrand quite put out his sight, and escaped."

"The joints of slaughter'd wretches are his food,
And for his wine he quaffs the streaming blood.
These eyes beheld, when with his spacious hand,
He seiz'd two captives of our Grecian band;
Stretch'd on his back, he dash'd against the stones
Their broken bodies and their crackling bones.
With spouting blood the purple pavement swims,
While the dire glutton grinds the trembling limbs.
Not unreveng'd Ulysses bore their fate,
Nor thoughtless of his own unhappy state;
For, gorg'd with flesh, and drunk with human wine,
While fast asleep the giant lay supine,
Snoring aloud, and belching from his maw
His undigested foam and morsels raw;
We pray, we cast the lots; and then surround
The monstrous body, stretch'd along the ground:
Each, as he could approach him, lends a hand
To bore his eyeball with a flaming brand;
Beneath his frowning forehead lay his eye,
For only one did his vast frame supply,
But that a globe so large, his front it fill'd,
Like the sun's disk, or like the Grecian shield."

ORATORY.

Genuine oratory is one of the most pleasing and powerful of human gifts. But when we speak of oratory, we mean not that which frequently passes under the name. Affected intonation and gesticulation, assumed for the purpose of playing the orator; or "sound and fury signifying nothing," or signifying what you please, but which spring not from feeling, are any thing rather than oratory. The true orator does not act his subject, but is acted upon by that. His thunders burst forth spontaneous from elements surcharged with the electric fluid of intellectual enthusiasm.

The following article, from an English pen, is worthy of perusal and re-perusal, by all who practise public speaking:—

Most foreign writers, who have given any character to the English nation, whatever vices they ascribe to it, allow, in general, that the people are naturally modest. It proceeds, perhaps, from this our national virtue, that our orators are observed to make use of less gesture or action than those of other countries. Our preachers stand stock still in the pulpit, and will not so much as move a finger to set off the best sermon in the world. We meet with the same speaking statues at our bars, and all public places of debate. Our words flow from us in a smooth, continued stream, without those strainings of the voice, motions of the body, and majesty of the hand, which are so much celebrated in the orators of Greece and Rome. We can talk of life and death in cold blood, and keep our temper in a discourse which turns upon every thing that is dear to us. Though our zeal breaks out in the finest tropes and figures, it is not able to stir a limb about us. I have heard it observed more than once, by those who have seen Italy, that an untravelled Englishman cannot relish all the beauties of Italian pictures, because the postures which are expressed in them are often such as are peculiar to that country. One who has not seen an Italian in the pulpit, will not know what to make of that noble gesture in Raphael's picture of St. Paul preaching at Athens, where the apostle is represented as lifting up both his arms, and pouring out the thunder of his rhetoric amidst an audience of Pagan philosophers.

It is certain that proper gestures and vehement exertions of the voice cannot be too much studied by a public orator. They are a kind of comment to what he utters, and enforce every thing he says with weak hearers, better than the strongest argument he can make use of. They keep the audience awake, and fix their attention to what is delivered to them, at the same time that they show the speaker is in earnest, and affected himself with what he so passionately recommends to others. Violent gesture and vociferation naturally shake the hearts of the ignorant, and fill them with a kind of religious horror. Nothing is more frequent than to see women weep and tremble at the sight of a moving preacher, though he is placed quite out of their hearing; as in England we very frequently see people lulled to sleep with solid and elaborate discourses of piety, who would be warmed and transported out of themselves by the bellowing and distortions of enthusiasm.

If nonsense, when accompanied with such an emotion of voice and body, has such an influence on men's minds, what might we not expect from many of those admirable discourses which are printed in our tongue, were they delivered with a becoming fervour, and with the most agreeable graces of voice and gesture!

We are told that the great Latin orator very much impaired his health by the *luterum contentio*, the vehemence of action, with which he used to deliver himself. The Greek orator was likewise so very famous for this particular in rhetoric, that one of his antagonists whom he had banished from Athens, reading over the oration which had procured his banishment, and seeing his friends admire it, could not forbear asking them, if they were so much affected by the bare reading of it, how much more would they have been alarmed, had they heard him actually throwing out such a storm of eloquence?

How cold and dead a figure, in comparison of these two great men, does an orator often make at the British bar, holding up his head with the most insipid serenity, and stroking the sides of a long wig that reaches down to his middle! The truth of it is, there is often nothing more ridiculous than the gestures of an English speaker. You see some of them running their hands into their pockets as far as ever they can thrust them, and others looking with great attention on a piece of paper that has nothing written on it; you may see many a smart rhetorician turning his hat in his hands, moulding it into several different cocks, examining sometimes the lining of it, and sometimes the button of it, during the whole course of his harangue. A deaf man would think he was cheapening a beaver, when perhaps he is talking of the fate of the British nation. I remember, when I was a young man, and used to frequent Westminster Hall, there was a counsellor who never pleaded without a piece of packthread in his hand, which he used to twist about a thumb or a finger all the while he was speaking. The wags of those days used to call it "the thread of his discourse," for he was unable to utter a word without it. One of his clients, who was more merry than wise, stole it from him one day in the midst of his pleading; but he would better have left it alone, for he lost his cause by his jest.

I have all along acknowledged myself to be a dumb man, and therefore may be thought a very improper person to give rules for oratory; but I believe every one will agree with me in this, that we ought either to lay aside all kinds of gestures, (which seems to be very suitable to the genius of our nation,) or at least to make use of such only as are graceful and expressive.

CROWNING THE MAID.

We are told that in some of the villages of France, it is customary on certain occasions, to crown young maids of true modesty and real worth, with chaplets of flowers. The engraving represents one of these ceremonies. A beautiful arch or canopy is reared over the heads of the company, and a lady of rank is about to place the wreath on the head of the "rustic maid," in the presence of the village parson, and a large collection of gay spectators.

Such a tribute to moral excellence is not to be slighted by any means. Well that those who cannot be moved by the hope of a reward of greater value, can be excited even in this way. But it is far nobler when young people of both sexes aim at crowns very different from those with which it is customary to adorn the heads of these young French maids.

And what is the crown at which the young ought to aim? What, in short, would most adorn them? The "gray head" is said to be "a crown of glory, if it be found in the way of righteousness," but not otherwise. Righteousness, then, renders the gray hairs of the old a crown; but will it render the covering of younger heads a crown too?

If so, what is this righteousness? Reader, if you love God, and keep his commandments, you are in the way of righteousness. And if you are in the way of righteousness, whether your hair be white, or brown, or black, or gray, you have the crown, or *will* have it—a crown of glory that will not, like wreaths of flowers, fade away—but which is unfading and imperishable.

True righteousness is purity, holiness, excellence,—in feeling, in affection, in thought, in conversation, in action. After a little while, at the longest, there will be a mighty change in your appearance. The body that you and your friends now see, and think so much of, and call yours, will become a mass of lifeless matter, destined to putrefaction. But will the purity, and holiness of which I have been speaking—the qualities of the soul—putrefy with the body? Oh, no; never, never! The house which the soul lives in may be deserted; and may decay, but the inhabitant, the soul itself, will find its way to regions hitherto unknown, perhaps; but regions where they that are "wise shall shine as the sun in the firmament, and they that turn many to righteousness," or are righteous themselves, "as the stars for ever and ever."

GIANTS AND PIGMIES.

A story has been going the round of the papers, for some time past, about a large skeleton, found in Spain, said to be eighteen feet and ten French inches in length.

A western paper also contains an account of an old burying ground in White county, Tennessee, near the town of Sparta, in which numerous skeletons are found from seven to nine feet long, deposited in coffins of stone.

In the same neighbourhood are said to be found also three burying grounds, containing skeletons buried in the same manner, only nineteen inches long. One of them had 94 pearl beads around the neck. The graves are about two feet deep.

We shall find it difficult to believe either of these stories, till we have more ample evidence of their truth. The first and third, at the least, are wholly improbable.

POETRY.

From the Knickerbocker.

THE LAST WISH.

It is related in the Biography of Wilson, the Ornithologist, that he expressed a wish when conversing upon the subject of death, that when he died, he might be buried where the birds should come, and sing over his grave.

In the wild forest-shade,
Under some spreading oak and waving pine,
Or old elm, festoon'd with the gadding vine,
Let me be laid:
In this dim lonely grot,
No foot, intrusive, will disturb my dust;
But o'er me the songs of the wild bird shall burst—
Cheering the spot.

Not amidst charnel stones,
Or coffins dark and thick with ancient mould—
With tattered pall, and fringe of cankered gold,
May rest my bones:
But let the dewy rose,
The snowdrop and the violet lend perfume,
Above the spot, where, in my grassy tomb,
I take repose.

Year after year,
Within the silver birch-tree o'er me hung,
The chirping wren shall rear her callow young,
And the red robin the green boughs among,
Shall build her dwelling near:
And ever at the purple dawn of day,
The lark shall chant a pealing song above,
And the shrill quail, when the eve grows dim and gray
Shall pipe her hymn of love.

The blackbird and the thrush,
And golden oriole, shall flit around,
And waken, with a mellow gust of sound,
The forest's solemn hush.
Birds from the distant sea,
Shall sometimes thither flock, on snowy wings,
And soar above my dust in airy rings,
Singing a dirge to me!

SECTION XVI.

TRADITIONS OF THE FLOOD.

Traditions of the deluge, the most important event in reference to the external structure and appearance of our globe that has occurred since its creation, have been found to exist among the natives of the South Sea islands, from the earliest period of their history. Accounts more or less according with the Scripture narrative of this awful visitation of Divine justice upon the antediluvian world, have been discovered among most of the nations of the earth; and the striking analogy between those religiously preserved by the inhabitants of the islands of the Pacific, and the Mosaic account, would seem to indicate a degree of high antiquity belonging to this isolated people.

The principal facts are the same in the traditions prevailing among the inhabitants of the different groups, although they differ in several minor particulars. In one group the accounts state, that in ancient times Taaroa, the principal god (according to their mythology the creator of the world) being angry with men on account of their disobedience to his will, overturned the world into the sea, when the earth sank in the waters, excepting a few *aurus* or projecting points, which, remaining above its surface, constituted the present cluster of islands. The memorial preserved by the inhabitants of Eimeo, states, that after the inundation of the land, when the water subsided, a man landed from a canoe near Tiataepua, in their island, and erected an altar, or marae, in honour of his god.

The most circumstantial tradition preserved among the Windward Islands of this remarkable event is one, for the original of which I am indebted to Mr. Orsmond: the following is a literal translation:—

"Destroyed was Tahiti by the sea; no man, nor hog, nor fowl, nor dog remained. The groves of trees, and the stones, were carried away by the wind. They were destroyed, and the deep was over the land. But these two persons, the husband and the wife, (when it came in,) the wife took up her young chicken; the husband took up his young pig; the wife took up her young dog; and the kitten, the husband took up that. [These were all the animals formerly known to the people, and the term *fanaua*, young, is both singular and plural, so that it may apply to one, or to more than one chicken, &c.] They were going forth, and looking at Orofena,[*] the husband said, 'Up, both of us, to yonder mountain high.' The wife replied, "No; let us not go thither.' The husband said, 'It is a high and long rock, and will not be reached by the sea;' but the wife replied, 'Reached will be it by the sea yonder, we two on the mountain round as a breast, O Pitohito; it will not be reached by the sea.' They two arrived there. Orofena was overwhelmed by the sea; that mountain, Pitohito, (alone,) remained: that was their abode.

"There they watched nights ten,[†] the sea ebbed, and they two saw the little heads of the mountains in their elevation. When the sea dried or retired, the land remained without produce, without man, and the fish were putrid in the caves and the holes of the rocks. They said, 'Dig a hole for the fish in the sea.' The wind also was becoming feeble, and when it was dead or calm, the stones and the trees began to fall from the heavens; thither they had been carried by the wind. All trees of the land had been torn up, and carried high by the wind. They two looked about, and the woman said, 'Safe are we two from the sea, but death or hurt comes now in these stones that are falling. Where shall we abide?' Torn by the roots up had been all the trees, and carried above the pathway of the rain in the heavens.

"'Dig a hole for us two, a dwelling-place.' The hole was dug, covered with grass the bottom of the hole or cave; stones were spread on the top of the hole, and these covered over with earth. While these two were sitting within, they heard with terror the loud voice of the falling stones. Now they fell more thinly, then one little stone at a time fell, and afterward ceased entirely.

"The woman said, 'Arise you, and advance without, and see if the stones fall.' The man replied, 'I go not out, I shall die.' He waited till night and till day, and then said, 'The wind is truly dead, and the stones and the trunks of trees cease to fall, neither is there the sound of the stones.' They went out, and like a small mountain was the heap or collection of the stones and the wood. The earth and the rocks remained of the land. The shrubs were destroyed by the sea. They descended, and gazed with astonishment: there were no houses, nor cocoanuts, nor palm-trees, nor bread-fruit, nor hibiscus, nor grass; all was destroyed by the sea. They two dwell together. The woman brought forth two children; one was a son, the other a daughter. They grieved that there was no food for their children. Again the mother brought forth, but still there was no food. The children grew up without food; then the breadfruit bore fruit, and the cocoanut, and every other kind of food. In three days encircled or covered was the land with food. The land became covered with men. From two persons, the father and the mother, filled was the land."

The principal facts of this singular and curious account, though blended together by the natives in the order in which they are here given, probably refer to two distinct events. The total inundation of the land is perhaps a relic of the account of the deluge, and the tearing up and falling of the trees and stones, to some violent hurricane or volcanic eruption.

The tradition which prevails in the Leeward Islands is intimately connected with the island of Raiatea. According to this, shortly after the first peopling of the world by the descendants of Tataa, *Ruahatu*, the Neptune of the South Sea islanders, was reposing among the coralline groves in the depths of the ocean, on a spot that, as his resort, was sacred. A fisherman, either through forgetfulness, or disregard of the tabu and sacredness of the place, paddled his canoe upon the forbidden waters, and lowered his hooks among the branching corals at the bottom. The hooks became entangled in the hair of the sleeping god. After remaining some time, the fisherman endeavoured to pull up his hooks, but was for a long period unable to move them. At length they were suddenly disentangled, and he began to draw them towards the surface. In an instant, however, the god, whom he had aroused from his slumbers, appeared at the surface of the water, and after upbraiding him for his impiety, declared that the land was criminal, or convicted of guilt, and should be destroyed. The affrighted fisherman prostrated himself before the god of the sea, confessed his sorrow for what he had done, and implored his forgiveness, beseeching him that the judgment denounced might be averted, or that he might escape. Ruahata, moved by his penitence and importunity, directed him to return home for his wife and child, and then proceed to a small island called Taomorama, which is situated within the reefs on the eastern side of Raiatea. Here he was promised security, amid the destruction of the surrounding islands. The man hastened to his residence, and proceeded with his wife and child to the place appointed. Some say he took with him a friend who was residing under his roof, with a dog, a pig, and a pair of fowls, so that the party consisted of four individuals, besides the only domesticated animals known in the islands.

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[*] The mountain in Tahita.

[†] The native mode of reckoning time is by nights instead of days.

They reached the refuge appointed before the close of day; and as the sun approached the horizon the waters of the ocean began to rise, the inhabitants of the adjacent shore left their dwellings on the beach, and fled to the mountains. The waters continued to rise during the night, and the next morning the tops of the mountains only appeared above the wide-spread sea. These were afterwards covered, and all the inhabitants of the land perished. The waters subsequently retired, the fisherman and his companions left their retreat, took up their abode on the mainland, and became the progenitors of the present inhabitants. I have frequently conversed with the people on the subject, both in the northern and southern groups, but could never learn that they had any accounts of the windows of heaven having been opened, or the rain having descended. In the legend of Ruahatu, the Toamarama of Tahiti, and the Kai of Kahinarii in Hawaii, the inundation is ascribed to the rising of the waters of the sea. In each account, the anger of the god is considered as the cause of the inundation of the world, and the destruction of its inundation. The element employed in effecting it is the same as that mentioned in the Bible; and in the Tahitian tradition, the boat or canoe being used as the means of safety to the favoured family, and the preservation of the only domestic animals found on the islands, appear corrupted fragments of the memorial of Noah, the ark, and its inmates.

In several respects the Polynesian account resembles not only the Mosaic, but those preserved by the earliest families of the postdiluvian world, and supports the presumption that their religious system has descended from the Arkite idolatry, the basis of the mythology of the Gentile nations. The mundane egg is conspicuous in the cosmogony of some of the most ancient nations. One of the traditions of the Hawaiians states that a bird deposited an egg (containing the world in embryo) upon the surface of the primeval waters. If the symbol of the egg be supposed to refer to the creation, and the bird be considered a corrupted memorial of the event recorded in the sacred writings, in which it is said, "The Spirit of God moved upon the face of the waters," the coincidence is striking. It is no less so if it be referred to the ark, floating on the waters of the deluge. The sleep of Ruahatu accords with the slumber of Bramah, which was the occasion of the crime that brought on the Hindoo deluge. The warning to flee, and the means of safety, resemble a tradition recorded by Kœmpfer, as existing among the Chinese. The canoe of the Polynesian Noah has its counterpart in the traditions of their antipodes, the Druids, whose memorial states the bursting of the waters of the lake Lleon, and the overwhelming of the face of all lands, and drowning all mankind, excepting two individuals, who escaped in a naked vessel, (a vessel without sails,) by whom the isle of Britain was repeopled. The safety which the progenitors of the Peruvian race are said to have found in caves, or the summits of the mountains, when the waters overflowed the land, bears a resemblance to the Hawaiian; and that of the Mexican, in which Coxcox, or Tezpi, and his wife were preserved in a bark, corresponds with the Tahitian tradition. Other points of resemblance between the Polynesian account and the memorial of the deluge preserved among the ancient nations might be cited; but these are sufficient to show the agreement in the testimony to the same event preserved by the more distant tribes of the human family.

HISTORY.

THE PYRAMIDS OF EGYPT.

There are few subjects which have occupied so much of antiquarian research as the Pyramids of Egypt, and few which have better deserved the zealous inquiry they have awakened. Whether the gigantic character of their outward form be considered, the singularity of their internal design, or the length of their duration, the mind derives a pleasing awe from the great associations with which they are connected. In surveying them, the genius of the past seems to be present to commune with us, and to mingle us with the earliest offspring of mankind. Their unchanging and apparently indestructible forms have outlived successive generations, and endured amidst the ruins of Babylon and Rome, the ravages of Cambyses, and the conquests of Alexander.

These mysterious buildings are called the PYRAMIDS OF GIZEH, from a village of that name on the banks of the river Nile, from which they are distant about eleven miles, forming almost a line to the westward of the city of Cairo. The platform or high rocky ground on which they stand, rises out of a strip of sandy plain about thirty miles long, extending by the side of the Nile, and sloping upwards to about eighty feet above the level of the river. The two largest Pyramids are named after two kings, Cheops and Cephrenes, whose tombs they are supposed to be. The largest of the two—that of Cheops—may well have been considered as one of the Wonders of the World, the north side being 693 feet in length, and the whole building covering something more than eleven English acres—a size sufficiently monstrous to stagger belief, if the fact were not established beyond dispute. Pliny and Diodorus Siculus, two ancient historians, who wrote of these buildings since the Christian era, agree in stating that not less than 360,000 men were employed in erecting the Great Pyramid; and it is added that twenty years were expended in the work. It may be proper to remark, with regard to the size of the Pyramids, that engravings of them have rather tended to mislead; for as it is impossible to represent their real bulk on paper, drawings made to give an idea of their form, naturally tend to diminish the idea of their size, in the imagination of the observer.

The four sides of all Pyramids, large and small exactly face the cardinal points.

These Pyramids, with several smaller ones in a greater or less state of preservation, occupy the Plain of Gizeh. More to the south, within a limit of twenty or thirty miles, on the same western bank of the Nile, and at about the same distance from the bed of the river, there are other groups as at Saccara, Dashour, and Ramlie. Of these, the first place is connected with Gizeh by a chain of sepulchres and ruined buildings; but there are numerous others, not so connected, in different places, even so far southward as Nubia.

The third Pyramid of Gizeh is that of Mycerinus; it has three similar Pyramids ranged along its south face. The Great Pyramid has six, and three of a larger size, but much decayed on its eastern face.

Besides these, an extensive region of tombs, arranged in streets crossing each other, and occupying the same shape and extent of ground as the base of the Pyramid of Cheops are found along its western side.

The second Pyramid has a line of chambers cut in the rock, and on its eastern side are the ruins of a temple. The third has a similar temple and avenue; and, indeed, the eastern face of the Great Pyramid bears traces, though more indistinct, of a similar structure; but the second temple, that of Cephrenes, is distinguished by having the SPHYNX ranged in front of the centre of its eastern face, bearing all the marks of having been connected with it by communications cut through the rock under ground. Between the paws of the Sphynx a perfect temple was discovered, a few years ago, by the intrepid traveller Belzoni, on clearing away the sand by which it had been choked up for ages.

The magnificent prospect from the top of this Pyramid has been described by the French traveller Savary, who visited Egypt in 1770, in glowing terms. After occupying seven hours in ascending to its summit, "the morning light," says he, "discovered to us every moment new beauties: the tops of gilded minarets, and of date tree and citron groves, planted round the villages and hills; anon the herds left the hamlets; the boats spread their light sails, and our eyes followed them along the vast windings of the Nile. On the north appeared sterile hills and barren sands; on the south the river and waving fields, vast as the ocean: to the west the plain of Fayum, famous for its roses: to the east the picturesque town of Gizeh, and the towers of Fostat, the minarets of Cairo, and the castle of Saladin, terminated the prospect. Seated on the most wonderful of the works of man, as upon a throne, our eyes beheld by turns a dreadful desert; rich plains in which the elysian fields had been imagined; villages; a majestic river; and edifices which seemed the work of giants. The universe contains no landscape more variegated, more magnificent, or more awful."

The ancients knew little of the interior structure of these giant piles. Herodotus, who lived 445 years before Christ, merely speaks of an entrance leading to the interior, by hearsay from the priests, who informed him that there were secret vaults beneath, hewn out of the natural rock. Strabo, who lived after the Christian era, only describes a single slanting passage which led to a chamber in which was a stone tomb. Diodorus Siculus, who lived forty-four years before Christ, agrees with this; and Pliny, who lived A. D. 66, adds that there was a well in the Great Pyramid, eighty cubits deep. This is all the ancients have said about the interior.

The Egyptian priests, indeed, assured Aristides, a Greek traveller, about two centuries before Christ, that "the excavations beneath were as great as the height above." And Ebn Ebd Alkokim, an Arabic writer of the ninth century, says, that the builders "constructed numerous excavated chambers, with gates to them, forty cubits under ground." Other Arabian writers say these chambers contain chests of black stone, in which were deposited the sacred archives of King Saurid, who built the Pyramid. Many discoveries (perhaps a burial place under ground) obviously remain to be made.

The same Arab historian, Alkokim, gives an account of the opening of this building under the Caliphate, from which time it has remained in the condition seen and described by all modern travellers, to the time of the Italian traveller, Caviglia, who made a discovery of a new chamber and passages, about ten years ago. "After that Almamon the Caliph (A. D. 820,) entered Egypt, and saw the Pyramids, he desired to know what was within, and therefore would have them opened. He was told it could not possibly be done. He replied, I will have it certainly done. And that hole was opened for him, which stands open to this day, with fire and vinegar. Two smiths prepared and sharpened the iron and engines, which they forced in: and there was a great expense in the opening it; and the thickness of the wall was found to be twenty cubits. Within they found a square well, and in the square of it, there were doors: every door of it opened into a house, (or vault,) in which there were dead bodies wrapped up in linen. Towards the upper part of the Pyramid, they found a chamber, in which was a hollow stone; in it was a statue of stone, like a man, and within it a man, upon whom was a breastplate of gold, set with jewels, and on him were written characters with a pen, which no man can explain.

Greaves, an Englishman, who visited the Great Pyramid in 1648, described the passages thus opened, and then open, very accurately, and suspected that at the bottom of a well in the Pyramid, was the passage to those secret vaults mentioned by Herodotus; but he made no new discovery. Davison, who visited it in the middle of the eighteenth century, discovered some secret chambers and passages connecting the largest gallery with the central room, and an apartment four feet high over it. He descended the well 155 feet, but found further progress blocked up. Caviglia was the first to discover the above suspected passage. After much trouble in clearing the narrow opening at the end of the first or entrance gallery of the Pyramid, he found that it did not terminate at that point, as hitherto supposed, but proceeded downwards to the distance of 200 feet. It ended in a door-way on the right, which was found to communicate with the bottom of the well. But the new passage did not terminate here: it went beyond the door-way twenty-three feet, and then took a horizontal direction for twenty-eight more, where it opened into a spacious chamber immediately under the central room.

This new chamber is twenty-seven feet broad, and sixty-six feet long. The floor is irregular; nearly one half of the length from the eastern, or entrance end, being level, and about fifteen feet from the ceiling; while, in the middle, it descends five feet lower, in which part there is a hollow space bearing all the appearance of the commencement of a well, or shaft. From thence it rises to the western end, so that there is scarcely room between the floor and the ceiling to stand upright."

On the south of this chamber is a passage hollowed out, just high and wide enough for a man to creep along upon his hands and knees, which continues in the rock for fifty-five feet, and then suddenly ends. Another at the east end commences with a kind of arch, and runs about forty feet into the solid body of the Pyramid.

Mr. Salt, the late intelligent British Consul in Egypt, was so struck by this discovery as to express his belief, that the under-ground rooms were used for "the performance of solemn and secret mysteries."

As to the second Pyramid of Gizeh, the ancients knew less about it than they did of the first. Herodotus says it has no under-ground chambers, and the other authorities are silent. But the enterprising Belzoni found its entrance, in the north front, in 1818, and discovered at the same time, that it had been previously forced open by the Arabian Caliph, Ali Mehemet, A. D. 782, more than a thousand years before. After forcing an entrance, and advancing along a narrow passage, one hundred feet long, he found a central chamber, forty-six feet long by sixteen wide, and twenty-three high, cut out of the solid rock. It contained a granite sarcophagus (a tomb) half sunk in the floor, with some bones in it, which, on inspection by Sir Everard Home, proved to be those of a cow. An Arabic inscription on the walls implies, that it had been opened in the presence of the Sultan Ali Mehemet.

There have been many opinions expressed by learned men as to the object of these structures. One is, that they were the granaries of Joseph. This may be confuted by the smallness of the rooms, and the time required in building. Another, that they were observatories, which is accusing the builders of great absurdity, since the neighbouring rocks were better calculated for the purpose. The Arabians generally think that they were built by King Saurid, before the deluge, as a refuge for himself and the public records, from the Flood; but this opinion requires no answer. Josephus, the Jewish historian, who wrote A. D. 71, ascribes them to his countrymen, during the captivity in Egypt. As sundials, they would have failed. Shaw and Bryant, who wrote in the middle of the last century, believed them to be temples, and the stone chest a tank for holding water used for purification. Pauw, who lived at the same time with Shaw and Bryant, considers the Great Pyramid as the tomb of Osiris; and that Osiris having fourteen tombs for various parts of his dismembered body, fourteen pyramids must have been devoted to them, and the annual funeral mysteries connected with his death and resurrection. But the greater number of writers, ancient and modern, believe it to be the tomb of Cheops, the alleged builder. Improving on this notion, Maillet (1760) supposed that the chambers were built for the purpose of shutting up the friends of the deceased king with the dead body; and that the holes on each side of the central chamber of the Great Pyramid, were the means by which they were to be supplied with food, &c.; an opinion which would have appeared sufficiently ludicrous, if it had not been exceeded by that expressed by an old Moulah to Bonaparte, when in Egypt (1779) that the object was to keep the buried body undecayed, by closely sealing up all access to the outward air. Another ingenious theory ascribes them to the shepherd kings, a foreign pastoral nation which oppressed Egypt in the early times of the Pharaohs. However, this is after all but conjecture. The utmost uncertainty exists in all that concerns these gigantic, unwieldly, and mysterious buildings. Their builders, origin, date, and purposes, are entirely lost in the night of ages. As the sides of all the pyramids face the cardinal points, and of course give the true meridian of the places where they are situated, it would seem that their builders had made some progress in *scientific* knowledge; and the buildings themselves, under all circumstances, notwithstanding their plain exterior, clearly show the advanced state of the art in those very early times.

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NATURAL HISTORY.

THE YELLOW BEAR.

The Yellow Bear from Carolina (as the American bears in general are) is rather smaller than the European bears; it has also a more pleasant and agreeable countenance; is perfectly tame and sociable; the colour a lively bright orange, of a reddish cast; the hair thick, long, and silky. Its other properties are the same, as to the species in general.

THE BADGER.

The Badger, though a native of England, is an animal not very well known: the shyness of his temper, and his strong propensity to sleep, which softens the call of appetite, makes his appearance in search of prey less necessary and frequent. The night, also, is the season for his search; when, whether vegetable productions are satisfactory is not certain. The depredations in rabbit-warrens, and on young lambs, are frequently laid to the charge of the Badger: on the other hand, the Badger has little or no speed, and being much inclined to sleep, will certainly grow fat on less nourishment than more active quadrupeds.

The Badger digs a habitation in the earth with considerable dexterity; the fore paws being armed with long and strong nails, which work with expedition: the passage is of a winding form, leading to several apartments, but only one entrance; a bed of soft hay and grass is provided, to induce sleep, and secure a comfortable repose. This habitation is so enviable, that the fox, whose abilities for burrowing in the ground are inferior to the Badger's, frequently ejects the lawful tenant by laying his fetid excrement at the mouth of the hole: the Badger being so cleanly an animal that the calls of nature are never obeyed within the apartment.

The female brings three or four cubs in summer, which are suckled for some time, and afterwards are provided with such food as her abilities or industry can procure. Badgers are frequently eaten, and are said to make good bacon.

The hair of the Badger is very long, coarse, and rough, which gives it a very uncouth and clumsy appearance, and disguises the true shape of the limbs; each hair is tinged with three different colours: the roots a dirty white, the middle black, the extremities ash colour, or gray, which has produced the well-known saying, "As gray as a badger." The chest and belly are very dark, nearly black; a stripe of the same also extends from the eye to the ear.

Badgers are common in most northern countries, and are found in some warmer ones: the Chinese are very fond of their flesh, which is often an article in their butchers' shops; they are hunted by night for the sake of the skin; when attacked by the dogs, they defend themselves with great courage, and bite very severely. It has one single advantage over its assailants. Its skin is so thick, and especially so loose, that the teeth of the dogs can make little impression on it, and the Badger can turn himself round in it, so as to bite them in their tenderest parts.

These animals are naturally of a chilly temperament. Such as are reared in a house seem to be never more happy than when near a fire. They are likewise very subject to the mange; and, unless carefully washed, the dogs that penetrate into their burrows are seized with the same distemper.

They are about two feet long, tail about nine inches; they have small eyes, and short round ears.

THE AMERICAN BADGER.

The American Badger has been for a long time known to naturalists, though it is but recently established as a species distinct from the Badger of Europe. By some of the European naturalists and compilers, our Badger has been considered as a mere variety of the European species, while by others it has been regarded as entirely the same; the fact was never fairly decided, until the publication of Sabine's Appendix. Sayo had, however, arrived at the same conclusion, and applied nearly the same name to it in the Journal of Long's Expedition to the Rocky Mountains, previous to the appear- of Sabine's observations.

Schreber was the first author who considered the American to be a distinct species, and Gmelin adopted this conclusion in his edition of Linne, though he was led to give the incorrect specific character of "palmis tetradactylis," in consequence of Buffon's statement, that the carcajou had but four toes on its anterior feet.

Nature has destined this animal to a subterraneous and solitary mode of life, which, together with its timid disposition and nocturnal habits, throw great difficulties in our way while endeavouring to ascertain its peculiarities. It is entirely inoffensive, and apparently feeble, but if denied the advantages of swiftness of motion or great size, it has not been left entirely destitute of the means of providing for its own safety. The long claws on its forefeet are admirably adapted for removing the earth, and the celerity with which it can escape from danger, by burrowing, is really surprising. It is altogether fruitless to attempt to secure the animal by digging after it, as its progress is too rapid, and the depth to which it descends too great. It is only by artifice that the badger can be brought from his retreat; this is effected by the aid of dogs, smoke, &c., and when driven to the last extremity, the strength of its jaws and the sharpness of its teeth, enable the animal to inflict the severest injury on its persecutors. The body of the Badger is thick and heavy, and its movements on the ground slow and creeping; there is little appearance of vivacity or intelligence in its aspect, yet it does not exhibit any appearance of dullness or stupidity. It is in fact endowed with exactly the degree of understanding which is suited to its peculiar condition: having the proper instruments for securing itself from ordinary enemies, as well as strength and courage enough defend itself when pressed, but little sagacity is necessary to enable it to obtain the requisite food, or to continue his kind. Neither should we indulge in reflections similar to those found in many books of natural history, and believe that the life of this animal is gloomy or wretched. To men it may appear gloomy or dreadful to live under ground, or to steal forth under cover of the night in search of food; but this is the only mode of life the Badger is susceptible of enjoying, and the only kind of action he is capable of.

The burrows of the Badger are deep and extensive, and several individuals have been found inhabiting one excavation. Within his subterraneous retreat he passes the day in sleep, and it is not until night veils all objects in shade that he comes forth to seek his subsistence. Then, fruits of different sorts, frogs, insects, and most probably any small animals to be procured, constitute his food.

The Badger has its young in summer, and generally two, three, or four, at a litter, which are occasionally brought out to the mouth of the burrow to enjoy the sunshine. The young become capable of procreating when two years old, and the period of their lives is extended to ten, twelve, or fifteen years. If taken when young, the Badger is easily tamed, soon becoming quite familiar and obedient.

The American Badger is a pretty little animal, and its aspect is not unlike that of some small pugfaced dogs. It is found most frequently on the plains adjacent to the Missouri and its tributaries, as well as on those near the Columbia river. It is not uniformly found in the open country; Lewis and Clark sometimes observed them in the woods.

This animal is about two feet five inches long, including the tail, which measures three inches, and its body appears long in proportion to its thickness. The fore and hind legs are short, but remarkably muscular; the forepaws are provided with the long claws peculiar to this genus, which gives them the means of burying themselves with great celerity even in a hard soil. The neck is short and the mouth wide; the eyes are black and small; the ears short, wide, and appearing as if a portion had been cut off them. The whiskers are arranged in four points on each side near the nose, and on the jaws close to the opening of the mouth. The hairs are much shorter on the sides and rump than on the other parts of the body, which imparts an appearance of flatness, especially when the Badger rests upon his belly. The length of the hair is upwards of three inches, especially upon the rump, whence it extends so far towards the extremity of the tail as to conceal it entirely, and gives to the whole of the posterior parts of the body "the appearance of a right-angled triangle, of which the tail forms an acute angle." Intermixed with the hair we find a small quantity of coarse, pale, reddish, yellow fur.

The American Badger differs from the European by generally being smaller and more slenderly formed; its head is full as long, but not so pointed towards the nose; neither is the profile at all similar to the Badger of Europe. In the European animal, the outline drawn from the forehead to the nose is quite straight, while in the American there is a considerable depression on a line with the eyes.

There is also a very striking difference between the markings of these animals. In the American Badger there is a narrow white line running from between the eyes towards the back; the remainder of the superior part of the head is brown, the under jaw and the whole of the throat are white. A semicircular brown spot is seen between the ears and the light-coloured part of the cheeks. Above the eyes the white marking extends triangularly for a short distance, and below it runs in a line with the eyes towards the forepart of the mouth; yet the whole eye is within the dark colour of the upper part of the head, and this colour runs at the corner of the eye, with an acute angle into the white.

The Badger of Europe has three broad white marks, one on each side and one on the top of the head, including the eyes and ears. All the parts under the throat and jaw are black. The hairs on the upper part of the body and sides of the American Badger are fine, long, and grayish; in the European the hairs on the same parts are darker, longer, and coarser. In the American, the under are lighter than the upper parts; in the European they are darker. In our animals the legs are of a dark brown; in the European quite black. Notwithstanding the European Badger is generally the largest, its dark coloured nails are smaller than those of the American, which are of a light horn colour. The tail of the American Badger is shorter than that of the European.

The American Badger weighs from fourteen to eighteen pounds.

RACES AT THE ANCIENT GAMES

ANCIENT AMUSEMENTS.

Cruel Sports—Olympic Games—Races—Crowning the Victors.

Ancient nations—the Greeks, Romans, Persians, &c.— had a great many public amusements. Some of them were very barbarous in their nature. Such were the combats with beasts. In these combats, criminals condemned to death were exposed to fight with lions, bears, wild bulls, and other fierce animals, and the crowd that attended appeared to take pleasure in seeing their fellow creatures mangled or torn in pieces.

How contrary to the spirit of Christianity. Even the religion of the Jews did not allow of these sports, and we do not learn that they every practised them. I am sorry to say that *bull-fights*, as they are called, and many other practices, which are very cruel, are tolerated, even now, in nations called Christian. But we must remember that the people in Christian nations are not all Christians *indeed*. Just in proportion as true Christianity *does* prevail, however, wicked sports disappear.

The ancients had a few amusements which were not barbarous. Doubtless you have read of the Olympic games. When they were held, people attended them from almost all parts of the world. The contests were principally either running races or wrestling. The prizes, on these occasions, were merely crowns of leaves and palm branches, but the honour of gaining them was considered very great. Even kings sometimes engaged in these sports. Indeed none were ever allowed to run for the prize but persons of good character and of respectable families.

The engraving represents very imperfectly one of these ancient races. The runners laid aside their garments, and, at an appointed signal, rushed forward, in the midst of many thousand spectators. The rewards were held up where they could see them, throughout the whole course of the race.

A SAXON VESSEL.

SHORT ACCOUNT OF VESSELS.

History appears to regard the Saxons, who came from Germany and began to settle in Great Britain about the year 449, as at first a kind of marauders or pirates. Their piratical excursions are said to have become so troublesome at one period, that the Roman government, who still held, or attempted to hold the country in subjection, sent out a fleet against them.

The engraving represents one of the rude vessels used by the Saxons at the period of which we have been speaking.

In the Bible, a small boat, not larger than a common row-boat, is sometimes called a *ship;* as when it is said of the Saviour, in the time of a storm, in the little sea or lake of Galilee, that "he was in the hinder part or stern of the *ship*, asleep, on a pillow;"—and of Peter, that, "when he was come out of the *ship*, he walked on the water," &c.

Even at the present day, people occasionally call all sorts of vessels, by the general name of *ships*. But it is not entirely correct, for all ships have three masts. We cannot, at present, go into a particular description of all sorts of vessels that traverse the "great deep;" but as most of our readers are *landsmen*, a very brief account of the more common kinds, will, we think, be useful.

When you see a vessel on the sea, at a great distance, the three principal things which meet your eye, are the *hull* or body of the ship; the *masts*, which are long poles that stand upright like the body of a tree; and the *rigging*, consisting of cloth sails, with yards, ropes, braces, &c. It is the number of masts, and shape of the rigging, which in general, give the different names to vessels.

A SHIP, as we have already told you, has *three masts*. It is also *square rigged;* which means that the sails are so set as to have a square appearance. This is done by having the *yards* (long poles to which the rigging is fastened) suspended on the masts, exactly crosswise, in such a way that the ends of each yard extend an equal distance from the mast.

A BRIG has only two masts; but, like a ship, is square rigged. There are several sorts of brigs, among which is the hermaphrodite brig.

SCHOONERS, also, have two masts, but they are not square rigged. Their principal sails have a slanting appearance.

A SLOOP has but one mast, and is not square rigged.

A CUTTER is much like a schooner, though there is some slight difference.

There are also many other names for smaller vessels; and different countries often have different names for the same thing. Vessels used in war have a greater variety of names than those used merely in commerce. The following are some of them:—Ships of the line, frigates, brigs, sloops, corvettes, schooners, transports, feluccas, gunboats, galleys, and revenue cutters.

BURYING ALIVE.

We have been furnished by a French gentlemen, with whom we happened to converse a few days ago on the subject to which it refers, with the following facts collected from medical history. They are painfully interesting, yet proper to be known, in order to prevent, if possible, their recurrence.—*N. Y. Com. Adv.*

"The diseases in which a partial and momentary suspension of life most often manifest itself, are Asphyxia, Hysterics, Lethargy, Hypochondria, Convulsions, Syncope, Catalepsis, excessive loss of blood, Tetanus, Apoplexy, Epilepsy, and Ecstacy.

"Among many cases which have been recorded, the following are particularly striking:—

"Chancellor Bacon relates that Dr. Scott, nicknamed the *subtle*, was buried alive at Cologne, and that recovering from his apparent death, he gnawed his hands and broke his head in his tomb.

"At Toulouse, a lady having been buried in the church of the Capuchin Friars with a diamond ring on her finger, a servant entered the vault to steal the ring, and, as the finger was swelled and the ring could not come off, he began cutting the finger; on hearing a loud shriek from the deceased, the thief fell senseless. At the time of morning prayers, the monks, having heard some groans, found the lady alive and the servant dead. Thus death had his prey; there was but a change of victims.

"A street porter in Paris, having died at the Hotel Dieu, was carried with the other dead into the same grave: recovering his senses towards 11 at night, he tore open his windingsheet, made his way to his house, knocked at the door, which was not opened to him without some difficulty, and took a new possession of his lodgings.

"In 1756, a woman in Paris was thought to be dead, and the body put on some straw with a taper at the feet; some young men who sat round the corpse, in a frolic overturned the taper. This set the straw on fire. The deceased, whose body the flames now reached, uttered a piercing shriek. Timely assistance was rendered, and she so well recovered that, after her resurrection, she became the mother of several children.

"On the 21st of November, 1763, Abbe Prevot, well known for his literary productions, was taken with an apoplectic fit as he was travelling through the forest of Chantilly. Being supposed dead, he was carried to the house of the mayor of the village, and the magistrate directed a post-mortem examination to be commenced. A piercing shriek uttered by the unfortunate man proved that he was alive. He expired under the scalpel.

"Dr. Devaux, a surgeon of St. Come hospital in Paris, had a maidservant who had three times been carried to burial. She did not recover her senses the last time, till they were lowering the coffin into the grave. That woman having died *anew*, the body was kept six days, lest they should have to bring her back a fourth time.

"A Mr. Rousseau of Rouen, had married a young lady of fourteen, whom he left in perfect health at his starting on a short journey. After a few days, he heard that, unless he returned immediately, he would find his wife buried. On reaching home he saw the funeral ready. In an agony of grief, he had the coffin removed to his room and unscrewed. He placed the body on a bed, and ordered twenty-five incisions to be made on it. At the twenty-sixth, probably deeper than the others, the deceased exclaimed, "How severely you hurt me!" Medical assistance was immediately given. The lady had afterwards twenty-six children.

"The wife of Mr. Duhamel, a celebrated lawyer, having been supposed dead twenty-four hours, the body was placed on a table for the purpose of preparing it for burial. Her husband strongly opposed it, not believing her dead, but in a state of suspended animation. To ascertain it, and knowing that she was very fond of the cymbal, and the tunes which cymbal players sing, he called one. Upon hearing the instrument and the voice, the deceased recovered motion and speech. She survived her apparent death forty years.

"Andre Vesale, first physician to Charles V. and Philip II., after attending a Spanish grandee, thought him dead. Having obtained leave to examine the body, he had scarcely thrust the bistoury into it and opened the chest, when he perceived that the heart palpitated. The relatives of the deceased prosecuted him as guilty of murder, the inquisitor as guilty of profaneness. Through the intercession of the king he obtained to be merely condemned to a pilgrimage to the Holy Land.

"In the sitting of the Royal Academy of Medicine, on the 10th of May, 1827, M. Chantournelle read a paper on the danger of hasty inhumations. This led to a discussion, in which M. Desgenettes stated that he had heard from N. Thouret, who had superintended the removal of the human remains of the cemetery and the charnel house *des innocens*, that many skeletons had been found in positions showing that the individuals had moved after their inhumation. Mr. Thouret had been so much struck with this, that he had inserted in his will an article relating to his own interment."

BIOGRAPHICAL SKETCH OF MAJOR ANDRE.

John Andre, aiddecamp to Sir Henry Clinton, and adjutant-general of the British army in America during the revolution, was born in England, in 1741. He was, in early life, a merchant's clerk, but obtained a commission in the army at the age of seventeen. Possessing an active and enterprising disposition, and the most amiable and accomplished manners, he soon conciliated the esteem and friendship of his superior officers, and rose to the rank of major.

After Arnold had intimated to the British, in 1780, his intention of delivering up West Point to them, Major Andre was elected as the person to whom the maturing of Arnold's treason and the arrangement for its execution, should be committed. A correspondence was for some time carried on between them, under a mercantile disguise, and the feigned names of Gustavus and Anderson; and at length, to facilitate their communications, the Vulture sloop of war moved up the North river, and took a station convenient for the purpose, but not so near as to excite suspicion.

An interview was agreed on, and, in the night of September 21, 1780, he was taken in a boat, which was despatched for the purpose, and carried to the beach without the posts of both armies, under a pass for John Anderson. He met General Arnold at the house of a Mr. Smith. While the conference was yet unfinished, daylight approached; and, to avoid the danger of discovery, it was proposed that he should remain concealed till the succeeding night.

He desired that he might not be carried within the American posts; but the promise, made to him by Arnold, to respect this objection, was not observed. He was carried within them contrary to his wishes and against his knowledge. He continued with Arnold the succeeding day, and when, on the following night, he proposed to return to the Vulture the boatmen refused to carry him, because she had, during the day, shifted her station, in consequence of a gun having been moved to the shore and brought to bear upon her.

This embarrassing circumstance reduced him to the necessity of endeavouring to reach New York by land. Yielding with reluctance to the urgent representations of Arnold, he laid aside his regimentals, which he had hitherto worn under his surtout, and put on a plain suit of clothes, and receiving a pass from the American general, authorizing him, under the feigned name of John Anderson, to proceed on the public service to the White Plains, or lower, if he thought proper, he set out on his return.

He had passed all the guards and posts on the road without suspicion, and was proceeding to New York in perfect security, when, on the twenty-third of September, one of the three militia men who were employed with others in scouting parties between the lines of the two armies, springing suddenly from his covert in the road, seized the reins of his bridle and stopped his horse.

Instead of producing his pass, Andre, with a want of self-possession, which can be attributed only to a kind of providence, asked the man hastily where he belonged; and being answered, "to below," replied immediately, "and so do I." He then declared himself to be a British officer, on urgent business, and begged that he might not be detained. The other two militia men coming up at this moment, he discovered his mistake; but it was too late to repair it.

He offered a purse of gold and a valuable watch, to which he added the most tempting promises of ample reward and permanent provision from the government, if they would permit him to escape; but his offers were rejected without hesitation. The names of the militia men who apprehended Andre, were John Paulding, David Williams, and Isaac Vanwert, who, immediately after searching, carried him before the commander, Colonel Jamieson.

On the 29th of September, 1780, General Washington appointed a board of fourteen general officers, part of whom were General Green, the Marquis de la Fayette, and Baron de Steuben, with the assistance of the judge advocate, John Lawrence. After the most mature deliberation, they pronounced Major Andre a spy from the enemy, and that, agreeably to the laws of nations, he ought to suffer death.

When his sentence was announced to him, he remarked, that since it was his lot to die, as there was a choice in the mode, which would make a material difference in his feelings, he would be happy if it were possible, to be indulged with a professional death; but the indulgence of being shot rather than hung, was not granted, because it was considered contrary to the custom of war.

When he was led out to the place of execution, he bowed familiarly to all those with whom he had been acquainted during his confinement; a smile of complacency expressed the serene fortitude of his mind. Upon seeing the preparations at the spot, he asked, with some emotion, "Must I die in this manner?" He was told it was unavoidable. "I am reconciled to my fate," said he, "but not to the mode." Soon after, however, recollecting himself, he added, "It will be but a momentary pang;" and, springing upon the cart, performed the last office to himself, with a composure that excited the admiration and melted the hearts of all the spectators.

Being told that the fatal moment was at hand, and asked if he had any thing to say, he answered, "Nothing, but to request that you will witness to the world that I die like a brave man."

Those days are lost in which we do no good: those worse than lost, in which we do evil.

We lessen our wants by lessening our desires.

SUNDAY IN PARIS.

To whatever cause it is owing, nothing can be more certain, than that infidelity again reigns lord of the ascendant in Paris. It is impossible to be a week in the metropolis without being sensible of this. It is computed that from 60,000 to 80,000 individuals, chiefly women, or persons of the poorest classes, believe in the Christian religion. The remainder, amounting to 800,000, make no pretension to such a faith. It is impossible, by any external appearance, to distinguish Sunday from Saturday, excepting that any species of amusement and dissipation goes on with more spirit on that day than any other. In Paris the shops are all open, the carts all going, the workmen all employed, on the early part of Sunday; and although a part of them are closed after two o'clock in the afternoon, it is not with the slightest intention of joining in any, even the smallest religious duty, that this is done. It is "*pour s'amuser*" to forget the fatigues of the week in the excitement with which it terminates, that the change takes place. At two o'clock, all who can disengage themselves from their daily toil, rush away in crowds to drink the intoxicating cup of pleasure. Then the omnibuses (public coaches) roll with ceaseless din in every direction out of the crowded capital, carrying the delighted citizens to St. Cloud, St. Germain, or to Versailles, ginguettes of Belleville, or the gardens of Vincennes; then the boulevards teem with volatile and happy crowds, delighted by the enjoyments of seeing and being seen; then the gardens of the Tuileries and the Luxembourg, the Jardin des Plantes, and the Champs Elysees, are enlivened with the young, the gay, and the handsome of both sexes, both rich and poor; then the splendid drive to the triumphal arch of Neuville, which is filled with the comparatively few equipages which the two revolutions have left to the impoverished hotels of the capital. While these scenes of gaiety and amusement are going on, the priests in each of the principal chapels are devoutly performing mass before a few hundred old women, tottering ecclesiastics, or young children; and ten or fifteen Protestant churches are assembling as many thousands to the duties of the reformed faith. Such is a Parisian Sunday, in what they ambitiously call the metropolis of European civilization. As evening draws on, the total disregard of religious observance, by all classes, is, if possible, still more conspicuous. Never, perhaps, is the opera filled with enthusiastic crowds as on Sunday evening; never are the theatres of the Port St. Martin, the Boulevards, the opera comique, the vaudeville, and the varieties, so full as on that occasion; never are the balls beyond the barriers so crowded; never is Tivoli so enlivened, or the open air concerts in the Champs Elysees thronged by so many thousands. On Sunday evening in Paris, there seems to be but one wish, one feeling, one desire, and that is, to amuse themselves; and, by incessantly labouring at that one object, they certainly succeed in it to an extent that could hardly be credited in colder or more austere latitudes.—*Blackwood's Edinburgh Mag.*

TEMPERANCE SOCIETIES.

The Wesleyan Methodist Magazine for May, 1834, an English publication, contains an interesting article on Temperance Societies. We gather the following:—

The means which they employ—persuasion, combined with associated example—were first brought to bear upon this enormous evil in North America. However simple these means appear, they have effected in that country a change of public opinion and custom, which has awakened the attention of the most distant civilized nations.

The first temperance society formed in Europe was by the exertions of Mr Carr, in 1829, at New Ross, in the south part of Ireland. Others were early formed in the north of Ireland and in Scotland.

In the north of England, where the earliest efforts were made, there are in Lancashire and Yorkshire alone, more than 30,000 members.

Above four hundred temperance societies and associations have been formed in England, including the interesting islands of Guernsey, Jersey, and Man; the whole comprising, according to the latest returns, more than eighty thousand members.

Scotland, under the direction of the vigorous committee of the Scottish Society, numbers about 400 societies, and 54,000 members.

In Ireland, notwithstanding numerous disadvantages and difficulties, about 20,000 persons have joined the standard of temperance societies.

The Canadas and other distant colonies are known to comprise several thousand members, making a total of more than 150,000 British subjects, voluntarily engaged to abstain from distilled spirits, except as a medicine, and to discourage intemperance in general.

Temperance societies are formed in Newfoundland, at Calcutta, and in Van Dieman's Land.

The Hottentots in the vicinity of the Cape of Good Hope, who were thought to be "beyond the reach of good example." take a lively interest in this reformation; and the inhabitants of the Society Islands of the Pacific, have formed themselves into numerous and zealous societies, to deliver their nations from the curse of spirit-drinking.

The king of Sweden, though surrounded by noble distillers, has officially expressed his distinct approbation of temperance societies; and the Crown Prince takes an active interest in their proceedings.

The government of Prussia has applied to the New York State Committee for a complete history of the temperance reformation, and "a sketch of the machinery necessary to be set in motion to enable government to establish temperance societies throughout the kingdom of Prussia.

POETRY.

THE SLAVE MOTHER.

I saw the burning tear,
Run down her dark brown cheek,
It told of wo and care—
Her tongue refused to speak.

I heard the stifled sigh
Burst from her throbbing breast—
To heaven she rais'd her eye,
As there her only rest.

Ah! why these tears and sighs?
Ah! why this bitter life?
"My babe! my babe!" she cries,
"O stranger, bring relief.

"They tore him rude away,
"As pillow'd on my breast,
"I, at the close of day,
"Had hush'd him there to rest.

"I saw the clanking chains
"My husband's limbs secure;
"I saw the purple stains,
"And the dark crimson gore.

"I saw the tear of wo
"Gather in his dark eye;
"I heard the lash's blow
"Extort the parting sigh.

"O God!" she frantic cries,
"The sword of justice take;
"And bounding from the skies,
"Bid sympathy awake.

"O! let a mother's prayer
"A God of justice move;
"She asks a refuge where
"He dwells himself—above."

Zion's Adv.

SECTION XVII.

NATURAL HISTORY.

THE AMERICAN BADGER.—Concluded.

"The hair of the Badger is always filthy; between the anus and the tail there is an opening, which, though it has no communication with any interior part, and is hardly an inch deep, continually emits an oily liquid. This the animal is fond of sucking. Its flesh, when the animal is well fed, makes excellent hams and bacon; and of its skin are made coarse furs, collars for dogs, and trappings for horses. The hair is used for painters' brushes.

"Hunting this animal forms a source of amusement and emolument to the Indians of Bocca Montana, Albarregas, and most tribes that inhabit the higher regions of the Cordilleras, from Coro to Cumana. As there are no stated periods for taking it, although in the months of August, September, and October, it is certainly fattest, they continue to search for it the whole year round, unless during the breeding season, when the flesh is lank and lean, and the lard, or butter (*manteca*) rancid. In making their hunting dispositions, they form parties of seven or eight, or more. When the tribe is numerous, they will sometimes take five, six, or seven miles in a sweep over the country; and such is their dexterity and address in taking these animals, that they will nearly clear it for five or six years of Badgers, notwithstanding all the obstruction of brushwood, cover, &c. &c. In these excursions they are accompanied by a number of women and boys, whose business it is to build temporary huts, cook, collect fruits, and, lastly, to cure what Badger hams and gammons the men catch; this is no sinecure, and although they rest during the night, the day ushers them in more labour than comes to the hunter's share. When they arrive at the Badgers' haunts,—generally in high situations, contiguous to rocks, for the purpose of burrowing when hard pressed,—they soon discover his traces by the manner in which he scrapes for pistachios and other nuts. They then search the rock until they find out the burrow, and also under the projecting roots of large trees, the hollows of which afford them shelter. When the burrows are in trees, they seldom give themselves the trouble of erecting pitfalls for them, as their curs kill and drag them out, or else they dig them out. When the burrows are in the rocks, they set to work to erect pitfalls or traps, in the building of which they display a regularity and system that would do credit to a European mason. As the falls are four feet by four in height and breadth, the flags with which they are built are so closely set, as to prevent the creature introducing his paw-nails between them; for his strength is such that he would raise a stone of two or three hundred weight. As the Badgers' family generally consists of seven or eight, the hunters set as many of those pitfalls in their way as will intercept them, one by one, in making their passage to their burrows; and frequently one in the mouth of the burrow, provided it is large enough, covering them with turf, earth, and leaves, over little twigs. As soon as they have made sufficient number, with incredible labour and perseverance, using no other implements than their hatchets and stone-hammers, the covering-flag is placed over; at the back of this they place a quantity of rubbish so as to give weight to its fall, and plant bushes so artfully as to deceive a stranger, forming a lane, through which the creature must necessarily pass to his burrow. Then one or two ascend the trees or highest rock, to give notice of the Badgers' approach; while another is buried in sight of the traps in such a manner as to be covered with leaves, and in such a posture as to observe the creatures coming toward the traps, and hurry them into them by missiles, but never attempts to show himself until the Badger passes him. In this manner the remainder of the party advance into the brushwood, and then let loose their dogs, who, on scenting the Badgers, set up a whining cry, accompanied by the rattles of the Indians, making the Badger start, and betake himself to his burrow. Sometimes seven or eight will start together, the most of which are always caught; but should one escape, they again hunt the ground over. If their party is not numerous enough, the women join after the first chase, as the danger of coming in contact with tigers is over, the first noise having started these as well as most noxious creatures. Indeed, the Badger is seldom found near the jungle, as he is not fond of such neighbours. Should one escape the traps, which is very seldom the case, they leave the traps set day and night, and a man to watch him, until hunger forces him to quit his subterraneous abode. Sometimes the Indian curs will enter, and kill the creature, if his burrow is large enough to admit them; yet he often makes them retreat, provided they cannot surround him, although those curs are certainly superior to our European terriers in bite, and tenacity of their hold. Whenever a Badger earths, the Indians cast lots, to know which shall watch until the Badger breaks, leaving him two days' provisions in the mean time, supposing this to be the usual time until the animal bolts. But it is sometimes a toss up which will hold out longest, especially if it be an old Badger; but even here the Indian has decidedly the advantage, as he is known to endure four days' hunger, without any bad results. If it happens in harvest, he is pretty well off; for his cunning makes him an overmatch for the animal, and he always carries the image of a man, of rude workmanship, which he sets before the earth, supported by twigs in a moving position; this prevents the Badger stirring while the Indian goes in quest of food, a work of little time with him, as he is satisfied with the first thing he finds: he soon returns to await the coming out of his subterraneous visiter, as the disgrace of returning without the Badger is shocking to a hunter, and debars his ever being a *guapo*, or warrior, until he can, by some extraordinary feat, wipe this stain off his name. They also use the noose or snare to catch these creatures, which is placed across the pathways, like rabbit-wires, with this exception, that the Indian snare is attached to a spring pole, that suspends and strangles the creature. The South American Badger is larger than those in Europe, and much browner; he is also much easier killed.

"Perhaps its habits are the most social of any quadruped in the universe; it is not known to quarrel with any other quadruped; even the fox, polecat, stinkard, the opossum, the land crab and snake, make it resign its abode, although it is much stronger than any of them. It also lives in the greatest harmony with its own species, subsisting principally on nuts, roots, and vegetables; and is cleanly in its habits, being observed to perform its ablution while the dew is on the ground. The Indians count two species of it, *viz.* the Marano, or pig-badger, and the Pero, or dog-badger. I am informed the former roots for its amusement like a pig; they bring forth two, three, and four at a litter, and preserve them carefully. Badger hams are certainly delicious, and the sale of them was prohibited but to the viceroy, who generally shipped a quantity of them annually to Madrid for the use of their august majesties; now they are purchased for one fourth their original value, as the viceroy sometimes paid eight or ten dollars for a pair of gammons. The way of curing them, perhaps, contributed to their flavour, which was simply to rub them with coarse sugar and Chili pepper, each day pressing them very hard until quite dry. This source of emolument would have been considerable to these hunting tribes, were they not cheated and made tributary to the viceroy, as they had to give him a dozen first, and afterward take trinkets out of the stores, at whatever price he chose to demand. The butter, or manteca de marano, as they call the lard, was also in great demand among the grandees, who fried most of their food in it.

"A party of eight would destroy two or three hundred Badgers and a quantity of deer, on their return home, besides guanas. These hunting parties are so delightful, even to the women, that the hopes of being allowed to accompany the men will be a stimulus to conduct themselves properly the year round. On those excursions they live well, and seem more happy than during the rainy season: in their way home they travel day and night rapidly, in spite of all obstructions, carrying long poles between them, on which the animals are slung; the skins and lard the boys carry. The women are certainly the heaviest loaded, and must keep pace with those gentry; the dogs too are better fed during this period, and seem to return with regret. A cloud of vultures generally hover over them, and are seen by their clans a day or two before they arrive, who make every preparation to receive them: their return is greeted like that of victors. The rainy nights are passed in recounting their exploits one to another.

THE SLOTH.

There are two species of this animal, viz. the Unau and the Ai.

"The Unau, or two-toed Sloth, has no tail, and only two nails on the fore feet. The Ai, or three-toed Sloth, has a short tail, and three nails on every foot. The nose of the Unau is likewise much longer, the forehead higher, and the ears longer than those of the Ai. It differs also in the hair. As for its interior, its viscera are both formed and situated differently; but the most distinctive, and, at the same time, the most singular character, is, that the Unau has forty-six ribs, while the Ai has but twenty-eight. This alone supposes two species, quite distinct one from the other; and these forty-six ribs, in an animal whose body is so short, is a kind of excess or error in nature; for, even in the largest animals, and those whose bodies are relatively longer than they are thick, not one of them is found to have so many. The elephant has only forty, the dog twenty-six, and the human species twenty-four, &c. This difference in the construction of the Unau and the Ai supposes a greater distance between these two kinds than there is between that of the cat and the dog, which have the same number of ribs; for the external differences are nothing in comparison with the internal ones, which are the causes of the others. These animals have neither incisive nor canine teeth; their eyes are dull and heavy; their mouths wide and thick; their fur coarse and staring, and like dried grass; their thighs seem almost disjointed from the haunch; their legs very short, and badly shaped; they have no soles to the feet, nor toes separately moveable, but only two or three claws excessively long, and crooked downwards and backwards. Unfurnished with teeth, they cannot seize any prey, nor feed upon flesh, nor even upon vegetable food.

"Although they have neither horns on their heads, nor hoofs to their feet, nor incisive teeth to their lower jaw, they are, notwithstanding, among the number of ruminating animals, and have, like them, four stomachs; so that they, consequently, can compensate for the quality of their food by the quantity they take at a time; and what is still more singular is, that, instead of having, like other ruminating animals, very long intestines, theirs are very short, like those of the carnivorous kind.

"Both these animals belong to the southern parts of the New Continent, and are never to be met with in the Old. The Unau, as well as the Ai, is to be met with in the deserts of America, from Brazil to Mexico: but they have never inhabited the northern countries. They cannot endure cold nor rain; the change from wet to dry spoils their fur which then resembles badly dressed hemp, rather than wool or hair.

"Mr. Waterton, who, in his numerous and protracted journeys through the woods of South America, had abundant opportunities of studying the natural history of the Sloth has shown the incorrectness of preceding writers upon this subject.

"Let us turn our attention (says he) to the Sloth, whose haunts have been hitherto so little known, and probably little looked into. Those who have written on this singular animal have remarked that he is in a perpetual state of pain; that he is proverbially slow in his movements; that he is a prisoner in space; and that, as soon as he has consumed all the leaves of the tree upon which he has mounted, he rolls himself up in the form of a ball, and then falls to the ground. This is not the case.

"If the naturalists who have written the history of the Sloth had gone into the wilds, in order to examine his haunts and economy, they would not have drawn the foregoing conclusions; they would have learned that, though all other quadrupeds may be described while resting on the ground, the Sloth is an exception to this rule, and that his history must be written while he is in the tree.

"This singular animal is destined by nature to be produced, to live, and to die, in the trees; and, to do justice to him, naturalists must examine him in his upper element. He is a scarce and solitary animal, and, being good food, he is never allowed to escape. He inhabits remote and gloomy forests, where snakes take up their abode, and where cruelly stinging ants and scorpions, and swamps, and innumerable thorny shrubs and bushes, obstruct the steps of civilized man. Were you to draw your own conclusions from the descriptions which have been given of the Sloth, you would probably suspect that no naturalist had actually gone into the wilds with the fixed determination to find him out and examine his haunts, and see whether Nature has committed any blunder in the formation of this extraordinary creature, which appears to us so forlorn and miserable, so ill put together, and so totally unfit to enjoy the blessings which have been so bountifully given to the rest of animated nature; for, as it has formerly been remarked, he has no soles to his feet, and he is evidently ill at ease when he tries to move on the ground; and it is then that he looks up in your face with a countenance that says, 'Have pity on me, for I am in pain and sorrow.'

"It mostly happens that Indians and Negroes are the people who catch the Sloth, and bring it to the white man. Hence it may be conjectured that the erroneous accounts we have hitherto had of the Sloth, have not been penned down with the slightest intention to mislead the reader, or give him an exaggerated history, but that these errors have naturally arisen by examining the Sloth in those places where Nature never intended that he should be exhibited.

"However, we are now in his own domain. Man but little frequents these thick and noble forests, which extend far and wide on every side of us. This, then, is the proper place to go in quest of the Sloth. We will first take a near view of him. By obtaining a knowledge of his anatomy, we shall be enabled to account for his movements hereafter, when we see him in his proper haunts. His fore legs, or, more correctly speaking, his arms, are apparently much too long, while his hind legs are very short, and look as if they could be bent almost to the shape of a corkscrew. Both the fore and hind legs, by their form, and by the manner in which they are joined to the body, are quite incapacitated from acting in a perpendicular direction, in supporting it on the earth, as the bodies of other quadrupeds are supported, by their legs. Hence, when you place him on the floor, his belly touches the ground. Now, granted that he supported himself on his legs like other animals, nevertheless he would be in pain, for he has no soles to his feet, and his claws are very sharp, and long, and curved; so that, were his body supported by his feet, it would be by their extremities; just as your body would be were you to throw yourself on all fours, and try to support it on the ends of your toes and fingers—a trying position. Were the floor of glass, or of a polished surface, the Sloth would actually be quite stationary; but as the ground is generally rough, with little protuberances upon it, such as stones, or roots of grass, &c., this just suits the Sloth, and he moves his fore legs in all directions, in order to find something to lay hold of; and when he has succeeded, he pulls himself forward, and is thus enabled to travel onwards, but, at the same time, in so tardy a manner as to acquire him the name of Sloth.

"Indeed, his looks and his gestures evidently betray his uncomfortable situation; and, as a sigh every now and then escapes him, we may be entitled to conclude that he is actually in pain.

"Some years ago I kept a Sloth in my room for several months. I often took him out of the house, and placed him upon the ground, in order to have an opportunity of observing his motions. If the ground were rough, he would pull himself forward by means of his fore-legs, at a pretty good pace, and he invariably shaped his course towards the nearest tree. But if I put him upon a smooth and well trodden part of the road, he appeared to be in trouble and distress: his favourite abode was the back of a chair; and, after getting all his legs in a line upon the topmost part of it, he would hang there for hours together, and often, with a low and inward cry, would seem to invite me to take notice of him.

"The Sloth, in its wild state, spends its whole life in the trees, and never leaves them but through force or accident. An all-ruling Providence has ordained man to tread on the surface of the earth, the eagle to soar in the expanse of the skies, and the monkey and squirrel to inhabit the trees: still these may change their relative situations without feeling much inconvenience; but the Sloth is doomed to spend his whole life in the trees; and, what is more extraordinary, not *upon* the branches, like the squirrel and the monkey, but *under* them. He moves suspended from the branch, he rests suspended from it, and he sleeps suspended from it. To enable him to do this, he must have a very different formation from that of any other known quadruped.

"Hence, his seemingly bungled conformation is at once accounted for; and, in lieu of the Sloth leading a painful life, and entailing a melancholy and miserable existence on its progeny, it is but fair to surmise that it enjoys life just as much as any other animal, and that its extraordinary formation and singular habits are but further proofs to engage us to admire the wonderful works of Omnipotence.

"It must be observed, that the Sloth does not hang head downwards like the vampyre. When asleep, he supports himself on a branch parallel to the earth. He first seizes the branch with one arm, and then with the other; and, after that, brings up both his legs, one by one, to the same branch; so that all four are in a line; he seems perfectly at rest in this position. Now, had he a tail, he would be at a loss to know what to do with it in this position: were he to draw it up with his legs, it would intefere with them; and were he to let it hang down, it would become the sport of the winds. Thus his deficiency of tail is a benefit to him; it is merely an apology for a tail, scarcely exceeding an inch and a half in length.

"I observed when he was climbing, he never used his arms both together, but first one and then the other, and so on alternately. There is a singularity in his hair, different from that of all other animals, and I believe, hitherto unnoticed by naturalists; his hair is thick and coarse at the extremity, and gradually tapers to the root, where it becomes fine as the finest spider's web. His fur has so much the hue of the moss which grows on the branches of the trees, that it is very difficult to make him out when he is at rest.

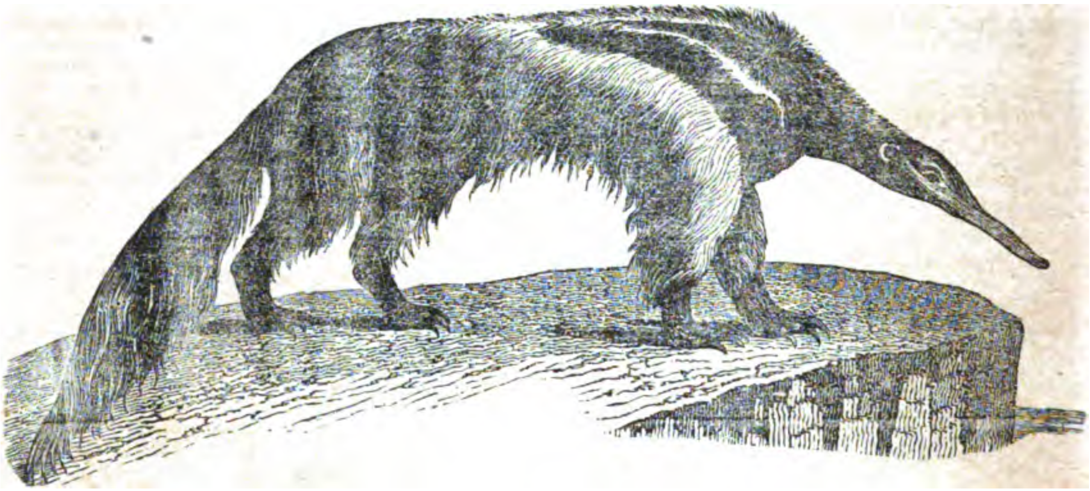
"The male of the three-toed Sloth has a longitudinal bar of very fine black hair on his back, rather lower than the shoulder-blades; on each side of this black hair there is a space of yellow hair, equally fine; it has the appearance of being pressed into the body, and looks exactly as if it had been singed. If we examine the anatomy of his fore legs, we shall immediately perceive, by their firm and muscular texture, how very capable they are of supporting the pendent weight of his body, both in climbing and at rest; and, instead of pronouncing them a bungled composition, as a celebrated naturalist has done, we shall consider them as remarkably well calculated to perform their ordinary functions.

"As the Sloth is an inhabitant of forests within the tropics, where the trees touch each other in the greatest profusion, there seems to be no reason why he should confine himself to one tree alone for food, and entirely strip it of its leaves. During the many years I have ranged the forests, I have never seen a tree in such a state of nudity; indeed I would hazard a conjecture, that by the time the animal has finished the last of the old leaves, there would be a new crop on the part of the tree he had stripped first, ready for him to begin again, so quick is the process of vegetation in these countries.

"There is a saying among the Indians, that when the wind blows, the Sloth begins to travel. In calm weather he remains tranquil, probably not liking to cling to the brittle extremity of the branches, lest they should break with him in passing from one tree to another; but as soon as the wind rises, the branches of the neighbouring trees become interwoven, and then the Sloth seizes hold of them, and pursues his journey in safety. There is seldom an entire day of calm in these forests. The trade wind generally sets in about ten o'clock in the morning, and thus the Sloth may set off after breakfast, and get a considerable way before dinner. He travels at a good round pace; and were you to see him pass from tree to tree, as I have done, you would never think of calling him a Sloth.

"Thus it would appear that the different histories we have of this quadruped, are erroneous on two accounts: first, that the writers of them, deterred by difficulties and local annoyances, have not paid sufficient attention to him in his native haunts; and secondly, they have described him in a situation in which he was never intended by nature to cut a figure; I mean on the ground. The Sloth is as much at a loss to proceed on his journey upon a smooth and level floor, as a man would be who had to walk a mile in stilts upon a line of feather-beds.

"One day, as we were crossing the Essequibo, I saw a large two-toed Sloth on the ground upon the bank; how he got there nobody could tell: the Indian said he had never surprized the sloth in such a situation before; he would hardly have come there to drink, for both above and below the place, the branches of the trees touched the water, and afforded him an easy and safe access to it. Be this as it may, though the trees were not above twenty yards from him, he could not make his way through the sand time enough to escape before we landed. As soon as we got up to him, he threw himself on his back, and defended himself in gallant style with his fore legs. 'Come, poor fellow,' said I to him, 'if thou hast got into a hobble to-day, thou shalt not suffer for it: I'll take no advantage of thee in misfortune; the forest is large enough both for thee and me to rove in: go thy ways up above, and enjoy thyself in these endless wilds; it is more than probable thou wilt never have another interview with man. So, fare thee well.' On saying this, I took up a large stick which was lying there, held it for him to hook on, and then conveyed him to a high and stately mora. He ascended with wonderful rapidity, and in about a minute he was almost at the top of the tree. He now went off in a side direction, and caught hold of the branch of a neighbouring tree; he then proceeded towards the heart of the forest; I stood looking on, lost in amazement at his singular mode of progress. I followed him with my eye till the intervening branches closed in betwixt us; and then I lost sight for ever of the two-toed Sloth. I was going to add, that I never saw a Sloth take to his heels in such earnest, but the expression will not do, for the Sloth has no heels."



THE ANT-EATER, OR ANT-BEAR.

"SOUTH America produces three species of animals, with a long snout, a small mouth, and no teeth; their tongues, of a round form, are remarkably long; with which they catch the ants, which are their principal food. On coming to an ant hill, the animal scratches it up with his claws, and then protrudes his slender tongue, which has the appearance of an exceedingly long earth-worm. It is covered with a viscous saliva. To this the ants adhere, and, by retracting it, he swallows thousands of them. He also tears up the nests of wood-lice, and often climbs the trees in pursuit of them, and of the wild bees and their honey. The first of these Ant-eaters is that which the Brazilians call Tamandua Guacu, or Great Tamandua, to whom the French settled in America have given the name of Tamanoir. The English call it the Great Ant-eater. This animal is about four feet in length from the extremity of the snout to the origin of the tail; his head is fourteen or fifteen inches long, his snout stretches out to a great length; his tail, two feet and a half long, is covered with rough hair, which is more than a foot in length; his neck is short; his head narrow; his eyes black and small; his ears round; his tongue thin, more than two feet long, which he folds again in his mouth, after he draws it entirely out. His legs are but one foot high; the fore-legs are a little higher and more slender than those behind; he has round feet; the fore feet are armed with four claws, the two middle ones are the longest; those behind have five claws. The hair of his head and body is black and white; this animal turns his tail up on his back, and covers with it his whole body, when he is inclined to sleep, or wants to shelter himself from the rain or the heat of the sun. The long hair of his tail and of his body is not round in all its extent; it is flat towards the end, and feels like dry grass. He waves his tail frequently and hastily when he is irritated, but it hangs down when he is composed, and he sweeps the way with it as he goes. The Tamanoir walks slowly; a man can easily overtake him in running: his feet seem less calculated to walk than to climb, and to fasten round bodies; and he holds so fast a branch or stick, that it is not possible to snatch either from him.

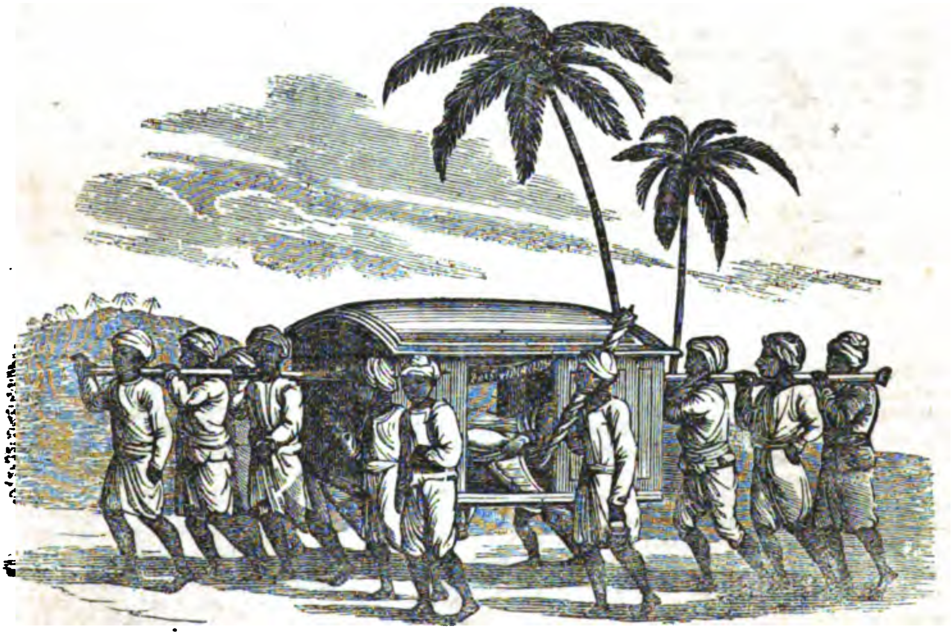
"The second of these animals is that which the Americans call Tamandua. He is much smaller than the Tamanoir; he is not above eighteen inches from the extremities of the snout to the rump: his head is five inches long, his snout crooked, and underneath flat and long; he has a tail ten inches long, without hair at the end; his ears are erect, and about an inch in length; his tongue is round, eight inches long, and placed in a sort of gutter or hollow canal within the lower jaw; his legs are not above four inches in height, his feet are of the same form, and have the same number of claws as the Tamanoir. He climbs up and holds fast a branch or stick, like the Tamanoir, and his march is equally slow. He does not cover himself with his tail, which cannot shelter him, being almost bare; the hair of the fore-part is shorter than that of the Tamanoir; when he sleeps he hides his head under his neck and his fore legs.

"The third of these animals is that which the naturalists of Guiana call Watiriwaou; and the French Fourmillier, or Ant-eater. He is still much smaller than the Tamandua, being not above six or seven inches in length from the extremity of the snout to the tail; his head is two inches long; the snout is not near so long as that of the Tamanoir, or the Tamandua; his tail is seven inches in length, is bent underneath, and bare at the end: his tongue is narrow, long, and flat; his neck is almost bare; the head is large, in proportion to the body; his eyes placed low, at a little distance from the corners of the mouth; his ears are small, and hidden by the hair; his legs are but three inches in height; the fore feet have no more than two claws, the outward is much longer than the inward one; the hind feet have four claws; the hair of the body is about nine inches long; he feels smooth, his colour is shining, diversified with red and yellow; his feet are not made to walk, but to climb up, and to take hold of branches of trees, on which he hangs himself by the extremity of his tail.

"These three animals, so different in size and proportions of the body, have, nevertheless, many things in common, as to conformation and their natural instinct. All three feed upon ants, and suck honey and other liquid and viscous substances; they gather quickly crumbs of bread and small pieces of meat; they are tamed and domesticated easily; they can subsist a long while without food; they do not swallow all the liquor which they keep in their mouth, one part of it issues out of their nostrils; they commonly sleep in the day-time, and change their station in the night; they go so slowly, that a man may overtake them easily whilst running in open ground. The savages eat their flesh, which has, however, an unsavoury taste.

"The Tamanoir looks at a distance like a great fox, and for that reason some travellers call him the American fox: he is strong enough to defend himself against a large dog, and even a jaguar; when he is attacked he fights standing on his hind legs, like the bear, and makes use of his fore claws, which are murdering weapons, for his protection; afterwards he lies on his back to use his hind legs, and in this situation he is almost invincible; he fights with obstinacy till the last extremity, and even after he has put his adversary to death, he keeps hold of him a long while. He is covered with long bushy hair, and a very thick skin; besides, his flesh is remarkably hard, and he seldom loses his life in these engagements.

"The Tamanoir, the Tamandua, and the Fourmillier, are natives of the hottest climates only of America; they are found in Brazil, in Guiana, and in the country of the Amazons, &c. They do not breed in Canada, nor in the other frozen regions of the New World, and do not belong consequently to the Ancient Continent."



MODE OF TRAVELLING IN INDIA.

The palankeen is the general mode of conveyance in India; but few of our readers have a very clear idea of its form, or of the manner in which it is used. We therefore give a representation of one of these vehicles, and a lively description of palankeen traveling, from the pen of Mr. Woodward, an American Missionary residing in Ceylon, who lately visited the peninsula.

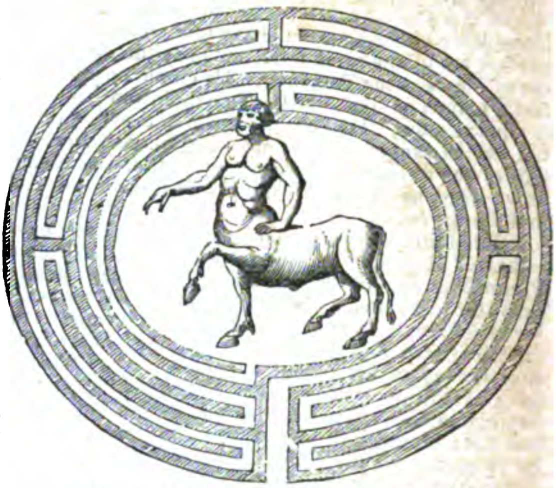
A palankeen is quite unlike any thing which I ever saw in America. The top or body of a small neat stage coach is, perhaps, the nearest in resemblance. Instead of the oval form, it is a parallelogram, six feet long, and two and a half wide, with the top a little raised in the centre, so as to shed the rain. Instead of the swinging doors of the coach, there are, on either side, two small sliding doors. Like the coach, it has either venetians or two small windows in each end. From the centre of each end of the palankeen run out poles three and-a-half feet long, which are supported by iron rods from each corner, meeting on the pole, six or eight inches from the body. Though a palankeen be thus large, it is generally made of light materials, so that, when empty, it may easily be raised by four men to the shoulders.

Early after noon, on the day appointed for commencing the journey, half a dozen or more coolies (baggage-bearers) call for their burdens. Each man has a cloth, answering for a pack, swinging over his shoulders, in which are his luncheon, knife, tobacco, &c. On his head is a small parcel of straw, in a circular form, adapted to his head, on which he carries his load. Each man, also, has a staff, for his support in rugged paths, or when fording rivers; to the head of this staff are attached a number of flat pieces of steel, which by their jingling frighten away serpents, and even wild beasts, at night. The burden for one cooly is generally about sixty pounds, and this he carries thirty miles a day. Being accustomed to the business, they travel many miles without stopping, and without even supporting the burden with the hand; and their daily wages are about 40 cents.

A few hours after the baggage leaves, another set of men, thirteen in number, present themselves before the door; these are the palankeen and torch-bearers. Their dress consists of a large white cloth bound round the head for a turban; and instead of the single cloth round their waists, as is common to all low castes, they wear a long white frock, so that their bodies are completely covered. This dress gives them a much better appearance than many of the higher caste; and was probably adopted that their personal appearance might be more acceptable to English gentlemen and ladies. The torch-bearer has a long roll of old cloths, closely bound together in a cylindrical form, four feet long, and four or five inches in diameter: this is a lamp. In his other hand is a leather or brass vessel, containing two quarts of oil (see Matt. xxv. 4). Having girded up their loins, they place the palankeen before the door. When the traveller is seated, the three men at each pole raise their clasped hands to their faces, in the attitude of prayer; and then, bowing a little with their faces towards the palankeen, they invoke the protection and blessing of their gods. How much instruction and reproof from the example of the heathen!

While moving on at a slow gait, the first few minutes are occupied in "getting the step," by which they move on with more ease to themselves and the person whom they carry; commencing, at the same time, their song, "Ha Hum, Ha Hum," by which the step is regulated. The monotony of this song is sometimes broken by some one more merry than the rest; who, with the apparent design of driving away melancholy or of pleasing their employer, raises his voice and sings, "Good gentleman good pay will give." When tired of this, some still more animating thought is thrown out, such as, "We'll take our pay, go home, and buy a fine cloth." Thus they run on, six only bearing the palankeen at a time. At a signal given from some one whose shoulder is weary of its burden, they stop, and in a moment pass the pole to the other shoulder. When one set becomes weary, they are relieved by the other, who run by their side. Having run one and a half or two hours, they rest a few moments, and spend this time in adjusting their clothes, girding up their loins, eating tobacco, &c.; or, if much fatigued, by lying down. The torch-bearer runs by the side of the palankeen, and, when his torch becomes dim, he pours in oil from the vessel which he carries in the other hand. On arriving at the bungalow or rest house, perhaps fifteen miles from the place of setting out, the bearers lie down and sleep till they are roused at three or four in the morning; at seven or eight they arrive at the second bungalow. The rest-houses on the road which I travelled, are very neat and commodious stone buildings, erected by government for the accommodation of travellers.—*The Tourist.*

MYTHOLOGY.



THE MINOTAUR IN THE LABYRINTH.

"Pasiphae, the wife of Minos, the king of Crete, loved an officer named *Taurus*; hence the fable of her attachment to a *bull*, and of her giving birth to a monster, half beast, called *Mino-Taurus*, or *Minotaur*.

"The Minotaur was shut up in a labyrinth, which Dædulus made by the order of king Minos. This labyrinth was a place diversified with very many windings, and turnings, and cross paths, running into one another. Dædalus was an excellent artificer of Athens, and, as it is said, invented the axe, the saw, the plummet, the auger, and glue; he also first contrived masts and yards for ships; besides, he carved statues so admirably that they not only seemed alive, but would never stand still in one place; nay, would fly away unless they were chained. This Dædalus, together with Icarus his son, was shut up by Minos in the labyrinth which he had made, because he had assisted Pasiphae in her intrigues, and finding no way of escape, he made wings for himself and his son, with wax and the feathers of birds; fastening those wings to their shoulders, Dædalus flew out of Crete into Sicily, but Icarus in his flight, neglecting his father's advice, observed not his due course, and out of juvenile wantonness flew higher than he ought; upon which the wax was melted by the sun, the wings broke in pieces, and he fell into the sea, which is since according to Ovid, named the Icarian sea from him.

Icarian seas from Icarus were called.

CIRCE.

"The most skillful of all sorceresses, poisoned her husband, a king of the Samaratians; for which she was banished by her subjects, and flying into Italy, fixed her seat on the promontory Circæum, where she fell in love with Glaucus, a sea god, who at the same time loved Scylla: Circe turned her into a sea monster, by poisoning the water where she used to wash. She entertained Ulysses, who was driven hither by the violence of storms, with great civility; and restored his companions, whom, according to her usual custom, she had changed into hogs, bears, wolves, and the like beasts, unto their former shapes."

HERMAPHRODITUS.

"Hermaphroditus was the son of Mercury. In one of his excursions through the forests, he was observed by a wood nymph called Salmacis, who, struck with his manly form and noble visage, both new to her, anxiously followed him wherever he went. But Hermaphroditus, inured to solitude by the nature of his pursuits, and unaccustomed to the soft attractions of female society, as anxiously avoided her, until she had recourse to stratagem, and to hide in ambush to behold him. At length, however, they met at a favourite fountain in the midst of the forest, where he usually came to bathe at the heat of the day. Here the infatuated nymph imprudently disclosed her sentiments. Such frankness merited a generous return, but the ungrateful and sturdy huntsman, unmoved by her advances, rejected her with disgust; upon which the indignant Salmacis prayed the gods to avenge the insult by wedding him for ever to a female form. Her prayer was granted, and the wretched Hermaphroditus, equally amazed and shocked at the change, prayed them in turn to alleviate the poignancy of his misfortune by sending him companions of similar form. The gods always merciful, listened to his entreaties, and decreed that whoever thereafter should bathe in the fountain, should resemble Hermaphroditus, and partake alike of the form and qualities of either sex."

HEBE AND GANYMEDE.

"Hebe was the daughter of Jupiter and Juno. She was the goddess of youth, and had the power of imparting to others her own perpetual healthfulness and vigour. She is in fact the personification of youthful beauty. She is always represented as a beautiful virgin, crowned with flowers, and attired in a variegated garment. Jupiter, on account of her beauty, chose her for his cup-bearer.

"The food of the gods was not supposed to be formed of the gross aliments of earth:

For not the bread of man, that life sustains,
Nor wine's inflaming juice, supplies their veins.

"Their sustenance was nectar and ambrosia. The former was their drink, and the latter their food. These imaginary aliments were more delicious than any known to mankind. Hebe presented nectar to Jupiter in a golden cup.

"Once when Hebe was offering nectar to Jupiter, she fell. This carelessness offended his majesty, and she was deprived of the honour of serving him.

"When Hebe was dismissed, Ganymede was chosen to succeed her.

"Ganymede was a prince of Troy. His occupation was the care of flocks on Mount Ida. He was exquisitely beautiful, and an eagle carried him from earth to heaven, where he poured out nectar for Jupiter."

SCHOOL STATISTICS OF THE UNITED STATES.

About one-third of the population of a country are between the ages of three and sixteen or eighteen; and of course are the proper subjects or school education.

In the United States, more than four millions of children ought to be under the influence of schools.

In Maine, the law requires that the inhabitants of every town pay annually for the support of schools a sum equal, at least, to 40 cents for every person living in it. That amounts to about $120,000. Their expenditures are more than 140,000.

In New Hampshire, a separate tax of $90,000 is raised for schools, besides an annual appropriation from a tax on Bank stock of $9,000 or $10,000.

In Vermont, more than $50,000 are raised for schools from a third per cent tax on the grand list, and as much more from district taxes, besides an income of nearly $1,000 from banks.

In Massachusetts are nearly 3000 schools, supported by public taxes and private subscriptions. In Boston, the schools contain more than 12,000 children, at an expense of about $200,000.

In Rhode Island are about 700 schools, supported by a legislative appropriation of $10,000 annually, by taxes, and by private subscriptions.

The Connecticut school fund is about two millions, but fails of its desired object. Children in the state, 85,000; schools about 1,500.

In New York are more than 9,000 schools, and over 500,000 children taught in them. School fund, $1,700,000: distributed annually, $100,000, but on the condition that each town raise by tax, or otherwise, as much as they receive from the fund. A wise provision.

New Jersey has a fund of $245,000, and an annual income of $22,000.

In Pennsylvania, during the last year, more than 250,000 children, out of 400,000, were destitute of school instruction.

Delaware has a school fund of $70,000.

Maryland has a school fund of $75,000, and an income for schools from the banks, which is divided between the several counties.

Virginia has a fund of $1,533,000, the income divided among the counties according to the white population, and appropriated to paying the tuition of poor children, generally attending private schools.

North Carolina has a fund of $70,000 designed for common schools.

South Carolina appropriates $40,000 annually to free schools.

Georgia has a fund of $500,000, and more than 700 common schools.

Alabama, and most of all the western and southwestern states, are divided into townships, six miles square, and each township into sections one mile square, with one section, the sixteenth, appropriated to education.

Mississippi has a fund of $280,000, but it is not available until it amounts to nearly $500,000.

The Legislature of Louisiana grants to each parish, or county, in that state, $2 62½ for each voter, the amount for any other parish not to exceed $1350, nor to fall short of $800.—$40,000 are applied to educating the poor.

Tennessee has a school fund of about half a million, but complaints are made that it is not well applied.

Kentucky has a fund of $140,000, but a portion of it has been lost. A report to the Legislature, from Rev. B. O. Peers, says, that no more than one third of the children between the ages of four and fifteen attend school.

In Ohio, a system of free schools, similar to that of New England, is established by law.

In Indiana, Illinois, and Missouri, no Legislative measures for the support of schools have been adopted. All the schools are supported by private tuition.

Family Lyceum.

IMPROVEMENT OF TALENT.

The ignorant have often given credit to the wise, for powers that are permitted to *none*, merely because the wise have made a proper use of those powers that are permitted to *all*. The little Arabian tale of the dervise shall be the comment of this proposition. A dervise was journeying alone in the desert, when two merchants suddenly met him. "You have lost a camel," said he to the merchants; "indeed we have," they replied; "was he not blind in his right eye, and lame in his left leg?" said the dervise; "he was," replied the merchants: "had he not lost a front tooth?" said the dervise; "he had," rejoined the merchants; "and was he not loaded with honey on one side, and wheat on the other?" "Most certainly he was," they replied; "and as you have seen him so lately, and marked him so particularly, you can, in all probability, conduct us to him." "My friends," said the dervise, "I have never seen your camel, nor ever heard of him, but from you." "A pretty story, truly," said the merchants, "but where are the jewels which formed a part of his cargo?" "I have neither seen your camel, nor your jewels," repeated the dervise. On this they seized his person, and forthwith hurried him before the cadi, where, on the strictest search, nothing could be found upon him, nor could any evidence whatever be adduced to convict him either of falsehood or of theft. They were then about to proceed against him *as a sorcerer*, when the dervise, with great calmness, thus addressed the court: "I have been much amused with your surprise, and own that there has been some ground for your suspicions; but I have lived long, and alone; and I can find ample scope for observation, even in a desert. I knew that I had crossed the track of a camel that had strayed from its owner, because I saw no mark of any human footstep on the route; I knew that the animal was blind in one eye, because it had cropped the herbage only on one side of its path; and I perceived that it was lame in one leg, from the faint impression which that particular foot had produced upon the sand; I concluded that the animal had lost one tooth, because wherever it had grazed, a small tuft of herbage was left uninjured in the centre of its bite. As to that which formed the burden of the beast, the busy ants informed me that it was corn on the one side, and the clustering flies that it was honey on the other."

Lacon.

ORIGIN OF SURNAMES.

The origin of names is curious and interesting. According to Mr. Brady, the oldest and most natural names seem to be those that are derived from complexion or stature, as brown, white, long, short, fairhead, golightly, heavysides, &c. Many are derived from trades or employments, as smith, wright, taylor, cook, gardner, waller, capper, or bonnet-maker.—Others are patronymics, as Richardson, Robertson, Robinson, Johnson, Harrison, Thomson, Wilson, &c. Another class from the place of birth, as Garrick, Wilton, Bolingbroke, Eaton, Leeds, Teasdale, Thorpe, East, West, Eastcott, Westcott, Prescott, &c. Another class from offices or dignities, as King, Lord, Noble, Knight, Stewart, Clark, Major. Another class from animals, vegetables, or utensils, as Swan, Crow, Dove, Herring, Bacon, Bullock, Ash, Beech, Rose, Bloom, Berry, Patten, Buckle, Scales, Wall, Chambers, and Kitchen. Another class from astronomy and agriculture, as Heaven, Moon, Star, Cloud, Fielder, Hedger, Ditcher, Close, Lane, &c. It is supposed surnames were introdued into England by the Normans. Mr. Brady, who has lately written "*A Critical and Analytical Dissertation on the Names of Persons*," appears surprised to find so many colours, as White, Green, Yellow, and not one Red; but probably this name (as the monthly reviewers observe) has been expanded into Reed and Read. We have a Mr. Lightfoot, whose weight is only one stone less than that of the memorable Lambert; a miss Ewe, who is the tenderest and most innocent lamb in the universe; a Mr. Plot, who never thought in his life; a Mrs. Blackmore, one of the fairest ladies in the world; and Mr. Lean, one of the fattest men in the city of London. Sometimes Mr. Wiseman is the greatest fool in his parish; and Mr. Price is notoriously the name of a man of no price or value whatever; Mr. Goodchild broke the hearts of his father and mother, by his wicked and undutiful conduct. Mr. Thoroughgood turned out a complete rogue and vagabond at fifteen years of age, and was transported at the expense of government at twenty-five years; Mr. Gotobed, up all night smoking and drinking; Mr. Hogg is so particularly cleanly and neat in his person, as to be the admiration of all his acquaintance; Mr. Armstrong has scarcely physical power in either of his arms to dance his own baby for five minutes; and Mr. Playfair is a notorious sharper. Many years have not elapsed since Horace drew beer at an ale-house in Wapping, and Homer was particularly famous for curing sore legs. Mrs. Fury is perhaps the quietest woman in Europe; Mr. Prater, always quiet with a pipe in his mouth; Mr. Nightingale has a worse voice than a raven; Mrs. Lightfoot has lost one of her legs, and got the gout in the other; and poor Mrs. Ogle was born blind. Such is the folly of giving incongruous names. A few years ago there lived in Cheapside, next door to each other, two persons of the names of Penny and Farthing, who could easily accommodate each other with ringing the changes in the small way. At present there are living in Smithfield and Chapel Street, Soho Square, two persons of the names of Carver and Cutmore, who keep eating houses —suiting their names to their actions in life—thus: Pray, Mr. *Cutmore*, *cut* me some *more* beef; and pray, Mr. *Carver*, do not in future *carve* my mutton so thin. And Langbourne Ward has lately been contested by two gentlemen, *Des-anges* and *Key*,—the first, whose were perhaps angels and ministers of grace—and the others remained *stationary* at the portal of heaven with the key in their hands.—*London Mirror.*

The damages sustained in the city of New York by the firing of Chinese crackers, by children, is estimated at 50,000 dollars a year.

It appears that Lafayette was literally buried at the point of the bayonet, an immense military force being in attendance, and so dispersed as to quell the least symptom of insurrection among the 2 or 300,000 citizens who attended the funeral.

POETRY.

SONG.—From Yamoyden

Sleep, child of my love! be thy slumber as light
  As the red birds that nestle secure on the spray;
Be the visions that visit thee fairy and bright
  As the dew drops that sparkle around with the ray.

O, soft flows the breath from thine innocent breast;
  In the wild wood Sleep cradles in roses thy head;
But her who protects thee, a wanderer unblessed,
  He forsakes, or surrounds with his phantoms of dread.

I fear for thy father! why stays he so long
  On the shores where the wife of the giant was thrown,
And the sailor oft lingered to hearken her song,
  So sad o'er the wave, e'er she hardened to stone.

He skims the blue tide in his birchen canoe,
  Where the foe in the moon-beams his path may descry;
The ball to its scope may speed rapid and true,
  And lost in the wave be thy father's death cry!

The power that is round us—whose presence is near,
  In the gloom and the solitude felt by the soul—
Protect that lone bark in its lonely career,
  And shield THEE, when roughly life's billows shall roll!

SECTION XVIII.

[From the Western Monthly Magazine.]

WESTERN SCENERY.

The traveller who visits our Valley for the first time, advancing from the east to the Ohio river, and thence proceeding westward, is struck with the magnificence of the vegetation which clothes the whole surface. The vast extent and gloomy grandeur of the forest, the gigantic size and venerable antiquity of the trees, the rankness of the weeds, the luxuriance and variety of the underbrush, the long vines that climb to the tops of the tallest branches, the parasites that hang in clusters from the boughs, the brilliancy of the foliage, and the exuberance of the fruit, all show a land teeming with vegetable life. The forest is seen in its majesty; the pomp and pride of the wilderness is here. Here is nature unspoiled, and silence undisturbed. A few years ago, this impression was more striking than at present; for now, farms, villages, and even a few large towns, are scattered over this region, diversifying its landscapes, and breaking in upon the characteristic wildness of its scenery. Still there are wide tracts remaining in a state of nature, and displaying all the savage luxuriance which first attracted the pioneer; and upon a general survey, its features present at this day, to one accustomed only to thickly peopled countries, the same freshness of beauty, and the immensity, though rudeness of outline, which we have been accustomed to associate with the landscape of the West.

I know of nothing more splendid than a western forest. There is a grandeur in the immense size of the trees—a richness in the colouring of the foliage, superior to any thing that is known in corresponding latitudes—a wildness and an unbroken stillness that attest the absence of man—above all there is a vastness, a boundless extent, an uninterrupted continuity of shade, which prevents the attention from being distracted, and allows the mind to itself, and the imagination to realize the actual presence and true character of that which had burst upon it like a vivid dream. But when the traveller forsakes the Ohio, and advancing westward ascends to the level of that great plain, which constitutes the surface of this region, he finds himself in an open champaign country—in a wilderness of meadows clad in grass, and destitute of trees. The transition is as sudden as complete. Behind him are the most gigantic productions of the forest—before him are the lowly, the verdant, the delicate inhabitants of the lawn; behind him are gloom and chill, before him are sunlight and graceful beauty. He has passed the rocky cliff, where the den of the rattlesnake is concealed, the marshes that send up fœtid stems of desolating miasma, and the canebrake where the bear and the panther lurk; and has reached the pasture where the deer is feeding, and the prairie flower displays its diversified hues. He has seen the wilderness in all its savage pomp and gloomy grandeur, arrayed in the terrors of barbarian state; but now beholds it in its festal garb, reposing in peace, and surrounded by light gaiety and beauty.

This distinction is not imaginary; no one can pass from one part of this region to another, without observing the natural antithesis of which we are speaking; and that mind would be defective in its perceptions of the sublime and beautiful, which did not feel, as well as see, the effect of this singular contrast. There is in the appearance of one of our primitive forests a gloomy wildness, that throws a cast of solemnity over the feelings; a something in the wide-spread solitude which suggests to the traveller that he is far from the habitations of man—alone, in the companionship of his own thoughts, and the presence of his God. But the prairie landscape awakens a different train of thought. Here light predominates instead of shade, and a variety of hue instead of a wearisome exuberance and monotony of verdure; while the extent of the landscape allows the eye to roam abroad, and the imagination to expand, over an endless diversity of agreeable objects.

The remarkable contrast is equally striking in the contour of the surface—in the difference between the broken and the level districts. If the traveller looks down from the western pinnacles of the Alleghany, he beholds a region beautifully diversified with hill and dale, and intersected with rapid streams. In western Pennsylvania, Virginia, Kentucky and Tennessee, he finds every variety of scenic beauty—the hill, the plain, the valley, the rocky cliff, the secluded dell, the clear fountain, and the rivulet dashing headlong over its bed of rock. The rivers have each their characteristic scenery. The Monongahela winding through a mountainous country, overhung with precipices, and shaded by heavy forests, with a current sufficiently gentle to be easily navigable to steamboats, has its peculiar features, which are instantly lost when the traveller has passed on the bosom of the Ohio. The winding course and picturesque scenery of the Ohio, between Pittsburgh and Wheeling, impress the beholders as strictly wild and beautiful; below the latter place, the features of the landscape become softened, the hills recede farther from the river, are lofty, and more rounded; and again, after passing Louisville, these elevations are seen less frequently, and gradually melt away, until the river becomes margined by low shores, and one continuous line of unbroken forest. But if we leave the gentle current of the Ohio, and ascend the Kentucky or the Cumberland, we again find rapid streams, overhung with precipices, and a country abounding in the diversities of a wild and picturesque scenery. Here may be seen the rapid current foaming and eddying over beds of rock, and the tall peak towering above in solitary grandeur. Here the curious traveller may penetrate the gloom of the cavern, may clamber over precipices, or refresh himself from the crystal fountain bursting from the bosom of the rock. But he will find every hill clad with timber, every valley teeming with vegetation; even the crevices of the limestone parapets giving sustenances to trees and bushes.

The scenery presented on the western shore of the Ohio is altogether different. The mountain, the rock, the precipice, and limpid torrent, are seen no more; and the traveller, as he wanders successively over Indiana, Illinois, Missouri, and the vast wilderness lying beyond, is astonished at the immensity of the great plain, the regularity of its surface, and the richness, the verdure, the beauty, of its wide-spread meadows.

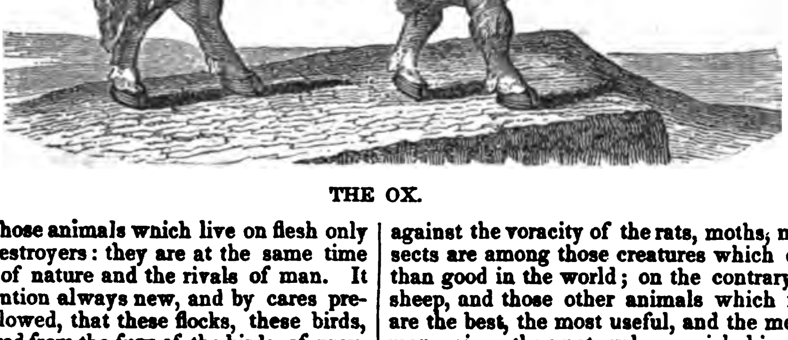
It is perhaps not easy to account for the intense curiosity and surprise which have been universally excited by the existence of these plains; for they have been found in various parts of the world. The steppes of Asia, the pampas of South America, and the deserts of Africa, are alike destitute of timber. But they have existed from different causes; and while one has been found too arid and sterile to give birth to vegetation, and another snow-clad and inhospitable, others exist in temperate climates and exhibit the most amazing fertility of soil. These facts show that there are various causes inimical to the growth of the trees, and the forest is not necessarily the spontaneous product of the earth, and its natural covering, wherever its surface is left uncultivated by the hand of man. The vegetable kingdom embraces an infinite variety of plants, 'from the cedar of Lebanon to the hyssop that groweth on the wall;' and the plan of nature, in which there is no miscalculation, has provided that there shall be a necessary concatenation of circumstances—a proper adaptation of soil, climate, moisture—of natural and secondary causes, to produce and to protect each: just as she has assigned the wilderness to the Indian, the rich pasture to the grazing herd, and the Alps to the mountain goat.

I apprehend that the intense astonishment with which the American pioneers first beheld a prairie, and which *we all* feel in gazing over those singularly beautiful plains, is the result of association. The adventurers who preceded us, from the champaign districts of France, have left no record of any such surprise; on the contrary, they discovered in these flowery meadows something that reminded them of home; and their sprightly imaginations at once suggested, that nothing was wanting but the vineyard, the peasant's cottage, and the stately chateau, to render the resemblance complete. But our immediate ancestors came from lands covered with wood, and in their minds the idea of a wilderness was indissolubly connected with that of a forest. They had settled in the woods upon the shores of the Atlantic, and there their ideas of a new country had been formed. As they proceeded to the west, they found the shadows of heavy foliage deepening upon their path, and the luxuriant forest becoming at every step more stately and intense, deepening the impression, that as they receded from civilization, the woodland must continue to accumulate the gloom of its savage and silent grandeur around them—until suddenly the glories of the prairie burst upon their enraptured gaze, with its widely extended landscape, its verdure, its flowers, its picturesque groves and all its exquisite variety of mellow shade and sunny light.

Had our English ancestors, on the other hand, first settled upon the plains of Missouri and Illinois, and the tide of emigration were now setting towards the forests of Ohio and Kentucky, climbing the rocky barriers of the Alleghany ridge, and pouring itself down upon the wooded shores of the Atlantic, the question would not be asked how the western plains became denuded of timber, but by what miracle of Providence, a vast region had been clothed, with so much regularity, with the most splendid and gigantic productions of nature, and preserved through whole centuries from the devastations of the frost and the fire, the hurricane and the flood. We have all remarked how simple and how rapid is the process of rearing the annual flower, or the more hardy varieties of grass, and with what ease a spot of ground may be covered with a carpet of verdure; and we know equally well how difficult it is to rear an orchard or a grove, and how numerous are the accidents which assail a tree. An expanse of natural meadow is not therefore so much an object of curiosity, as a continuous forest; the former coming rapidly to perfection, with but few enemies to assail it, the latter advancing slowly to maturity, surrounded by dangers. Hence there is to my mind no scene so imposing, none which awakens sensations of such admiration and solemnity, as the forest standing in its aboriginal integrity, and bearing the indisputable marks of antiquity—where we stand upon a soil composed of vegetable mould, which can only have been produced by the undisturbed accumulation of ages, and behold around us the healthful and gigantic trees, whose immense shafts have been increasing in size for centuries, and which have stood during that whole time exposed to the lightning, the wind, and the frost, and to the depredations of the insect and the brute.

(To be concluded in our next.)

NATURAL HISTORY.



THE OX.

"After man, those animals which live on flesh only are the greatest destroyers: they are at the same time both the enemies of nature and the rivals of man. It is only by an attention always new, and by cares premeditated and followed, that these flocks, these birds, &c. can be sheltered from the fury of the birds of prey, and the carnivorous wolf, fox, weasel, &c. and it is only by a continual war that he can preserve his grain, fruits and all his subsistence, and even his clothing, against the voracity of the rats, moths, mites, &c. Insects are among those creatures which do more harm than good in the world; on the contrary, the Ox, the sheep, and those other animals which feed on grass, are the best, the most useful, and the most valuable for man; since they not only nourish him, but consume and cost him least: the Ox, above all the rest, is the most excellent in this respect, for he gives as much to the earth as he takes from it, and even enriches the ground on which he lives; instead of which the horse, and the greatest part of other animals, in a few years impoverish the best pasture land.

"That the Ox is not so proper as the horse, the ass, the camel, &c. for carrying burthens, the form of his back and loins demonstrates; but the thickness of his neck and the broadness of his shoulders sufficiently indicate that he is proper for drawing, and carrying the yoke; it is also in this manner that he draws with the most advantage, and it is singular that this custom is not general.

"Throughout some of the French provinces they formerly obliged him to draw with his horns, for which the only reason they gave was, that when harness is fixed to his horns, he is managed with more ease: his head is very strong, and he draws very well in this manner, but with much less advantage than when he draws by the shoulders. He seems to be made on purpose for the plough; the size of his body, the slowness of his motions, the shortness of his legs, and even his tranquillity and patience when he labours, seem to concur in rendering him proper for the cultivation of the fields, and more capable than any other of overcoming the constant resistance that the earth opposes to his efforts.

"In those species of animals which man has formed into flocks, and where the multiplication is the principal object, the female is more necessary, more useful than the male; the produce of the Cow is a benefit which grows, and which is renewed every instant; the flesh of the calf is healthy and delicate; the milk is the food of children; butter relishes the greatest part of our victuals, and cheese is the common food of the country people; how many poor families are at this time reduced to live on their Cow! These same men who every day, and from morning to night, groan with anguish, exhausted with continual labour, gain nothing from the earth but black bread, and are obliged to give to others the flour, the substance of their grain; it is through them, and not for them, that the harvests are abundant; these same men who breed and multiply cattle, who take care of and are constantly occupied with them, dare not enjoy the fruits of their labor, the flesh of the beasts they are forbidden to eat, reduced as they are by the necessity of their condition, that is to say, by the brutality of other men, to live like horses, on barley and oats, or on common herbs, and sour milk.

THE COW.

"At eighteen months old, the Cow is arrived at puberty, and the Bull when he arrives at two years; but though they can continue their species at this age, it is better to stay till they are three years old before they are suffered to procreate: the strength of these animals is greatest from three years old till nine; after this, neither Cows nor Bulls are fit for any thing but to fatten for the slaughter: as at two years of age they are almost at their full growth, the length of their lives is about fourteen years, and they seldom live longer than fifteen.

"In stature the Bull equals the horse, but he is much stronger made in all parts of his body, particularly about the neck and head; his horns are thick and large, and when enraged, he gores and tosses both man and beast. This animal is very short lived for his size and strength, seldom exceeding sixteen years.

"The dullest and most idle animals are not those which sleep the soundest, or the longest. The Ox sleeps, but his sleep is short, and not very sound: for he awakes at the least noise: he usually lies on his left side, and that kidney is always larger and fatter than the kidney on the right side.

"Oxen, like other domestic animals, differ in colour; but red appears the most common, and the redder they are the more they are esteemed. It is said, that Oxen of a bay colour last longest; that those of a brown colour are sooner fatigued and shorter lived; that the gray, brindled, and white are not proper for work, and are only fit to be fatted for slaughter; but whatever colour the coat of the Ox is of, it should be shining, thick, and soft to touch; for if it is rough and uneven, we have reason to think that the animal is not well, or, at least, that he is not of a strong constitution.

"The Ox should only be worked from three years old to ten; and it is proper to take him then from the plough, in order to fatten and sell him, as the flesh will be better than if he be kept longer. The age of this animal is known by his teeth and horns. The first front teeth fall out when he is ten months old, and are replaced by others which are not so white: at sixteen months those on each side of the middle teeth drop out, and are replaced by others; and at three years old, all the incisive teeth are renewed: they are then all long, white, and even; and, in proportion as the Ox advances in years, they decay, and become unequal and black. The horns fall off at three years, and these are replaced by other horns, which, like the second teeth, fall no more; only those of the Ox and the Cow grow larger and longer than those of the Bull; the growth of these second horns is not uniform. The first year, that is to say, the fourth year of the age of the Ox, two little pointed horns sprout, which are even, and terminate at the head by a kind of knob; the following year this knob grows from the head, pushed out by a cylinder of horn, which forms and terminates also by another knob, and so on; for as long as the animal lives, the horns grow: these knobs become annular knots, which are easily to be distinguished in the horns, and by which also the age may be easily known, by reckoning three years for the first knob next the point of the horn, and one year more for each of the intervals between the other knobs.

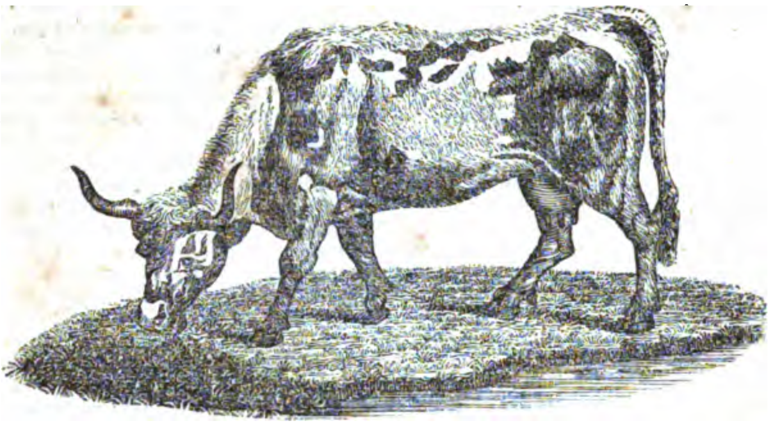
"The breeds of Oxen, especially in England, where much pains have been taken to improve them, are numerous. One of the largest kinds is the Kyloe Ox. It is a Scotch breed of cattle, chiefly of a black colour, with thick hides, much hair, and frequently large and long horns. They fatten well, and frequently attain to a great size. Mr. Culley mentions one which weighed one thousand four hundred and ten pounds and a half. The name of Kyloe is said to be derived from their having crossed the kyles or ferries, with which the Highlands of Scotland abound.

"The horse eats night and day, slowly, but almost continually; the Ox, on the contrary, eats quick, and takes in a short time all the food which he requires, after which he ceases eating, and lies down to ruminate. This difference arises from the different conformation of the stomachs of these animals. The Ox, of whose stomachs the first two form but one bag of a vast capacity, can in both of them, without inconvenience, at the same time receive grass, which it afterward ruminates and digests at leisure. The horse, whose stomach is small, and can receive but a small quantity of grass, is filled successively, in proportion as he digests it, and it passes into the intestines, where is performed the principal decomposition of the food.

"Chewing the cud is but vomiting without straining, occasioned by the reaction of the first stomach on the food which it contains. The Ox fills the first two stomachs, the paunch, and the bag, which is but a portion of the paunch, as much as he can. This membrane acts with force on the grass which it contains; it is chewed but a little, and its quantity is greatly increased by fermentation. Were the food liquid, this force of contraction would occasion it to pass by the third stomach, which only communicates with the other by a narrow conveyance, and cannot admit such dry food, or, at least, can only admit the moister parts. The food must, therefore, necessarily pass up again into the œsophagus, the orifice of which is larger than the orifice of the conduit, and the animal again chews and macerates it, and moistens it afresh with his saliva he reduces it to a paste, liquid enough for it to go into this conduit, which passes into the third stomach, where it is again macerated before it goes into the fourth; and it is in the last stomach that the decomposition of the hay is finished, which is reduced to a perfect mucilage.

"What chiefly confirms the truth of this explication is that as long as the animals suck, and are fed with milk and other liquid aliments, they do not chew the cud; and that they chew the cud much more in winter, when they are fed with dry food, than in summer, when they eat tender grass.

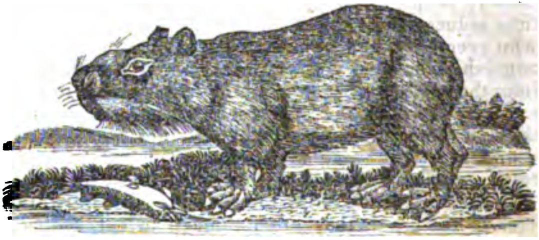
"Good milk is neither too thick nor too thin; its consistence should be such, that when we take a drop, it should preserve its roundness without running, and in colour it should be of a beautiful white: that which is inclinable to blue or yellow is not good; its taste should be sweet, without any bitterness or sourness: it is best during the month of May, and during the summer; and milk is never perfectly good but when the cow is of a proper age and in good health. The milk of young heifers is too thick, that of old cows during the winter is also too thick. The milk of cows which are hot is not good, any more than that of a cow which is near her time, or which is lately calved. In the third and fourth stomach of the calf which sucks, there are clots of curdled milk; these clots of milk dried in the air serve to make rennet, and the longer it is kept the better it is, and it requires but a small quantity to make a large quantity of cheese.



THE COW.

"Bulls, cows, and oxen are very apt to lick themselves, but mostly when they are quiet and at rest; and it is usual to rub all the parts of their bodies which they can touch with their dung. When this precaution is not taken, they raise up the hair of their coats with their tongues, which are very rough, and they swallow this hair in great quantities. As this substance cannot digest, it remains in the stomach, and forms round smooth balls, which are sometimes of so considerable a size, that they incommode them, and prevent their digestion by remaining in the stomach. These knobs in time get covered with a brown crust, which is somewhat hard; it is notwithstanding only a thick mucilage, which, by rubbing and coaction, becomes hard and shining; it is never found any where but in the paunch, and if any of the hair gets into the other stomachs, it does not remain any more than in the bowels, but seems to pass with the aliment.

"Animals which have incisive teeth, such as the horse, and the ass, in both jaws, bite short grass more easily than those which want incisive teeth in the superior jaw; and if the sheep and the goat bite the closest, it is because they are small, and their lips thin. But the Ox, whose lips are thick, can only bite long grass; and it is for this reason that they do no harm to the pasture on which they live, as they can only bite off the tops of the young grass; they do not stir the roots, and for this reason scarcely hurt the growth; instead of which, the sheep and the goat bite so close that they destroy the stalk and spoil the root. Besides, the horse chooses the most delicate grass, and leaves the largest to grow, the stalks of which are hard; instead of this, the Ox bites these thick stalks, and by little and little destroys the coarse grass; so that, at the end of some years the field in which the horse has lived becomes a very bad one, whilst that on which the Ox has broused becomes fine pasture."

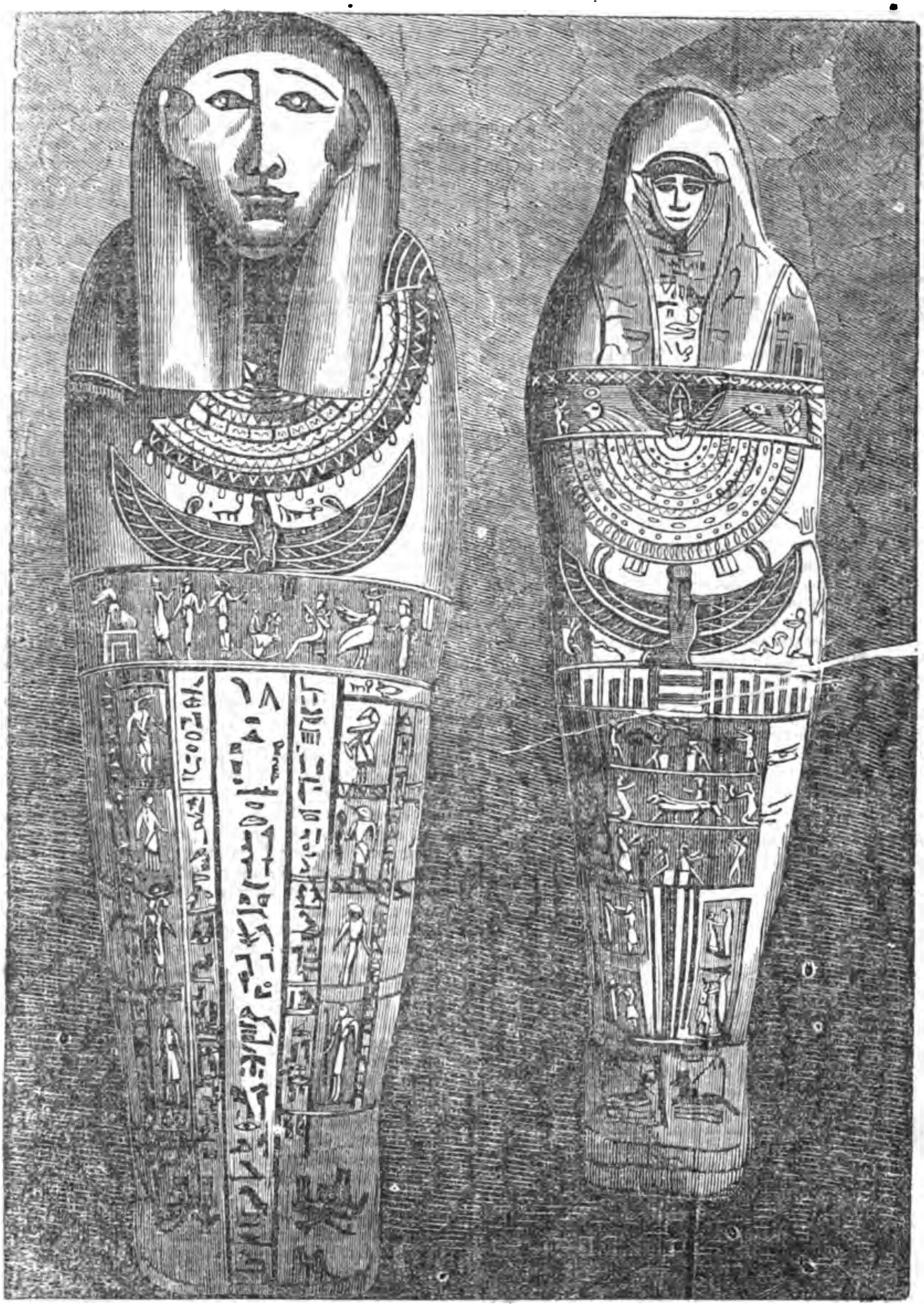


THE CABIAI.

"This American animal, which is also called the Capibara, has never yet made its appearance in England. It is not a hog, as naturalists and travellers pretend: it even resembles it only by trifling marks, and differs from it by striking characters. The largest Cabiai, is scarcely the size of a hog of eighteen months' growth; the head is longer; the eyes are larger; the snout, instead of being rounded, as in the hog, is split like that of a rabbit or hare, and furnished with thick strong whiskers; the mouth is not so wide; the number and form of the teeth are different; for it is without tusks: like the peccary, it wants a tail, and, unlike to all others of this kind, it is in a manner web-footed, and thus easily fitted for swimming and living in water. The hoofs before are divided into four parts, and those behind into three; between the divisions, there is a prolongation of the skin; so that the feet, when opened in swimming, can beat a great surface of water.

"This animal, thus made for the water, swims there like an otter, seeks the same prey, and seizes the fish with its feet and teeth, and carries them to the edge of the lake to devour them, with the greatest ease. It lives also upon fruits, corn, and sugarcanes. As its legs are broad and flat, it often sits upright upon its hind legs. Its cry resembles more the braying of an ass than the grunting of a hog. Its colour is a deep reddish brown above, and fawn beneath. It seldom stirs out but at night, and almost always in company, without going far from the sides of the water in which it preys. It can find no safety in flight; and, in order to escape its enemies which pursue it, it plunges into

HISTORY.



EGYPTIAN MUMMY AND CASE.

MANUFACTURES, MUMMIES, &c.

The ancient Egyptians had made considerable progress in several manufactures, to a degree which is really surprising. Their linen manufacture had a perfection equal to our own; for in many of their painted figures we find the garments represented quite transparent; and among the foldings of the mummies, Belzoni observed cloth as fine as our common muslin, very strong, and of an even texture.* It may be worth stating here, that round the mummy of Horsiesi, supposed to be upwards of three thousand years old, which was lately opened, and now lies at the College of Surgeons, were found pieces of linen of *seven* different degrees of texture; varying from that of sail-cloth to muslin; and in colour, from a deep brown to a pale delicate yellow; some of the pieces bore evident marks of having been anciently *darned.* The weight of the linen alone amounted to thirty-one pounds. The Egyptians had also the art of tanning leather, and staining it with various colours, as we do morocco; and they knew the method of embossing it. They were skilful in making glass, some of which was of a beautiful black. Pliny proves from this, that glass-making was very anciently practised. Besides enamelling, the art of gilding was in great perfection among them, and they could beat gold nearly as thin as it is done in the present day. They knew also how to cast bronze and copper, and to form the latter into sheets; and they had a metallic composition not unlike our lead. Carved works were very common; and the art of varnishing, and baking the varnish on clay, was so complete, that travellers have doubted whether it could be successfully imitated at present. They also possessed skill in painting, and in the blending of colours, some of which, on the walls of the temples and the lids of the mummy-cases, have a brilliancy and apparent freshness, which betoken no small skill in their composition.

Indeed, the more we read and reflect on the works of the early Egyptians, the more we are astonished. Among the ancient tombs, M. Champollion found several highly-interesting drawings, supplying particulars of the progress of this extraordinary people in the different professions, arts, and manufactures, of the modes they pursued in agriculture, in building, in trades, in military affairs, singing, music, and dancing; in the rearing of their cattle; in portrait painting; in games and exercises; in the administration of justice, and household economy; in historical and religious monuments; in navigation and zoology.

MUMMIES AND EMBALMING.

When any person died, says Diodorus, the whole of his family, and all his friends, quitted their usual habits, and put on mourning, abstaining, during the period of lamentation, from the bath, and from the use of wine and other luxuries. They seem to have had a notion, that a time would come when the soul would be re-united to the body on earth, and so they endeavoured to preserve the frame as a fit residence for its future guest. The expense of the funerals was regulated by three different scales, which made them costly, moderate, or cheap. About 250 pounds sterling, it is supposed, would pay for the best style of embalming a body; the second charge about 60*l*; and for the third method a trifling sum was demanded. Thus the various classes of people may generally be distinguished by the mode of their preservation.

Among the Egyptians were a set of persons who, like our undertakers, took upon themselves the whole service of the funeral for a stipulated amount. Proper officers were then employed to perform their respective parts. The duty of the first was to mark out how the dissection was to be made in the left flank for the purpose of embalming: this was executed by another officer with a sharp Ethiopian stone; and the task, as seeming to imply disrespect and cruelty towards the dead, was so hateful and degrading, as to oblige the dissector instantly to fly, as if he had committed a crime, those about pursuing and assailing him with stones:—a superstitious practice, by which they probably thought to compound with their consciences for an act considered sinful in itself.

At the disappearance of the dissector, the embalmers came forward. They were a kind of *caste* hereditary in Egypt, were held in high respect, looked upon as sacred, and permitted to have access to the temples, and to associate with the priests. They removed from the body of the deceased the parts most susceptible of decay, washing the rest with palm wine, and filling it with myrrh, cinnamon, and various sorts of spices. After this the body was put into salt for about forty days. When Moses, therefore, says that forty days were employed in embalming Jacob, we are to understand him as meaning the forty days of his continuing in the salt of nitre, without including the thirty days passed in performing the above-mentioned ceremonies; so that, in the whole, they mourned seventy days in Egypt, according to the words of Moses.

It is always valuable and interesting to perceive ancient customs, as handed down by general historians, illustrating the inspired records of Holy Writ. The passages alluded to are curious, and obviously refer to the point before us: *And Joseph commanded his servants the physicians to embalm his father: and the physicians embalmed Israel. And forty days were fulfilled for him; for so are fulfilled the days of those which are embalmed; and the Egyptians mourned for him threescore and ten days.*—GEN. l. 2, 3. And again, at verse 26, *So Joseph died, being an hundred and ten years old; and they embalmed him, and he was put in a coffin in Egypt.*

After swathing the body in fine lawn bandages, glued together with a thin but powerful gum, they spread over it the richest perfumes. The precious trust was afterwards returned into the hands of the relations, so entirely preserved, that not only the figure and the lineaments of the face appeared unchanged, but even the eye-brows and eye-lashes were not disturbed. Thus some of the Egyptians kept the bodies of their ancestors in their houses, in open cases, or with glass before them, "not thinking it right that the features of their dead relations should be unknown or forgotten by their own kindred." For the prevalence of this strange custom at a certain period, there is the authority of Diodorus, who wrote about fifty years before the Christian æra: and Lucian (A. D. 150) mentions his having been present when mummies were placed on seats at table, as if they had been alive. It is fair to conclude, however, that the bodies, instead of remaining in this way above-ground, were generally swathed round in folds of cere-cloth, strongly saturated with aspheltum, or a bituminous pitch; that they were then deposited in a chest or coffin, according to the rank or wealth of the party, and consigned to the silent tomb.

There is a considerable difference in the appearance of the various cases or coffins which contain mummies. These were usually made of sycamore, unlike our sycamore; some of the large cases contain others within them, either of wood or painted plaster. The inner cases are sometimes fitted to the body, others are only covers to the body. Many of the outer cases are plain, others slightly ornamented, and some literally covered with well-painted figures. Of the latter description is that represented to the left of the reader in the Engraving on the preceding page. The original (which may be seen in the British Museum, Eighth Room, Case 3,) was found by some Arabs in one of the fields of the dead at Sakara, near Cairo, and sent to England by Captain Lethieullier in 1722. The inscription, when read according to the principles of Dr. Young and Champollion, tells us, that the person whose body it originally contained, was named Arouni or Arouini, the son of Sarsares, or Sarsaris; for as there are no vowels in the middle of the words, the names cannot be determined with perfect exactness. He appears to have been of royal blood: for the inscription in the centre begins with the words, "*Royal* Devotions to Phtah-Sokari," like the Papyrus of the Bubastite Princes, given in Champollion's *Precis*, xv. The mummy with the gilt face, which is in the adjoining case, No. 2, appears not to have originally belonged to this coffin, although it was taken out of it; for it is the body of a priestess, whose name was Tsennofre.*

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* Mr. Basil Montagu, in his *Thoughts on Laughter*, states the case of a party, against whom an action was brought in 1821, for infringing a patent, defending himself in the following remarkable manner. The question was, whether the plaintiff's mode of weaving canvass was new or not. A witness declared, that it was known and practised more than two thousand years ago! And he proved his words by referring to the cere-cloth of an Egyptian mummy of acknowledged antiquity.

The paintings on the coffins generally refer to the entrance of the deceased into his new state of existence. Thus, in one of the compartments of the coffin of Horsiesi, a priest of Thebes, whose mummy was lately opened by Mr. Pettigrew, at the College of Surgeons, there is a remarkable group, emblematic, one might imagine, of a future trial. The god Osiris, with his usual high cap on his head, and sitting on his throne, receives a person, probably the deceased, who is introduced by a hawk-headed deity. Behind the throne stand two female figures, the foremost supposed to be Isis, the wife of Osiris, in attendance on the god. Below these are two pairs of female forms in separate rows, with ample wings extending from their arms, the lower pair having the faces of birds. Above, as well as below all these devices, appears the *Scaraæus*, or sacred beetle: an air of extreme absurdity is given to one of these insects, by its having the head of a hawk.

The beetle was considered by the Egyptians to represent the sun; and one, formed of stone or baked earth, is frequently found, next to the skin, on the breast of the human mummy. Such is the case with that of Horsiesi, a stone beetle, of a pale yellow, being still attached to the body; and above it, round the mummy's neck, are six or seven small pieces of different-coloured pottery strung together, probably for amulets. The body looks dark and charred, as if burnt; and its general appearance would lead, as in other instances, to the opinion, that it had been violently heated when the bandages were applied. The latter appear to have been put on wet. False eyes of enamel have been inserted in the sockets. This latter peculiarity Belzoni often observed in the mummies of priests; who always appeared folded in a most careful manner, such as to show the great respect in which their office was held. Their arms and legs, he remarks, were not enclosed in the same envelope with the body, as in the common mode, but were bandaged separately, even the fingers and toes being thus preserved distinct.—*Lond. Sat. Mag.*

The following Address to a Mummy a few years ago, was attributed to Mr. Roscoe.

ADDRESS TO AN EGYPTIAN MUMMY.

And thou hast walked about, (how strange a story!)
In Thebes's streets three thousand years ago;
When the Memnonium was in all its glory,
And time had not begun to overthrow
Those temples, palaces, and piles stupendous,
Of which the very ruins are tremendous.

Speak! for thou long enough hast acted dummy,
Thou hast a tongue, come, let us hear its tune;
Thou'rt standing on thy legs, above ground, Mummy!
Revisiting the glimpses of the moon;
Not like thin ghosts, or disembodied creatures,
But with thy bones, and flesh, and limbs, and features.

Tell us, for doubtless thou canst recollect,
To whom should we assign the Sphinx's fame;
Was Cheops or Cephrenes architect,
Of either pyramid that bears his name?
Is Pompey's pillar really a misnomer?
Had Thebes a hundred gates as sung by Homer?

Perhaps thou wert a mason, and forbidden
By oath to tell the mysteries of thy trade.
Then say what secret melody was hidden
In Memnon's statue which at sun-rise played?

Perhaps thou wert a priest, and hast been dealing,
In human blood, and horrors past revealing.

Perchance that very hand, new pinioned flat,
Has hob-a-nobbed with Pharoah, glass to glass,
Or dropped a half-penny in Homer's hat,
Or doffed thine own to let Queen Dido pass,
Or held, by Solomon's own invitation,
A torch at the great temple's dedication.

I need not ask thee if that hand, when armed,
Has any Roman soldier mauled or knuckled,
For thou wert dead, and buried, and embalmed,
Ere Romulus and Remus had been suckled!
Antiquity appears to have begun,
Long after thy primeval race was run.

Thou could'st develop, if that withered tongue
Might tell us what those sightless orbs have seen,
How the world looked when it was fresh and young,
And the great Deluge still had left it green;
Or was it then so old that History's pages
Contained no record of its early ages?

Still silent? incommunicative elf!
Art sworn to secresy? then keep thy vows;
But pr'ythee tell us something of thyself,
Reveal the secrets of thy prison house;
Since in the world of spirits thou hast slumbered,
What thou hast seen, what strange adventures numbered?

Since first thy form was in this box extended,
We have above-ground seen some strange mutations;
The Roman empire has begun and ended,
New worlds have risen, we have lost old nations,
And countless kings have into dust been humbled,
While not a fragment of thy flesh has crumbled.

Didst thou not hear the pother o'er thy head,
When the great Persian conqueror, Cambyses,
Marched armies o'er thy tomb with thund'ring tread,
O'erthrew Osiris, Orus, Apis, Isis,
And shook the pyramids with fear and wonder,
When the gigantic Memnon fell asunder?

If the tomb's secrets may not be confessed,
The nature of thy private life unfold:
A heart has throbbed beneath that leathern breast,
And tears adown that dusty cheek have rolled,
Have children climbed those knees, and kissed that face?
What was thy name and station, age and race?

Statue of flesh—immortal of the dead!
Imperishable type of evanescence!
Posthumous man, who quitt'st thy narrow bed,
And standest undecayed within our presence?
Thou wilt hear nothing till the judgment morning,
When the great Trump shall thrill thee with its warning.

Why should this worthless tegument endure,
If its undying guest be lost for ever?
O let us keep the *soul embalmed and pure*
In living virtue, that, when both must sever,
Although corruption may our frame consume,
Th' immortal spirit in the skies may bloom!

THE ANSWER OF THE EGYPTIAN MUMMY.

Child of the latter days! thy words have broken
A spell that long has bound these lungs of clay,
For since this smoke-dried tongue of mine hath spoken,
Three thousand tedious years have rolled away.
Unswathed at length, I "stand at ease" before ye,
List, then, oh! list, while I unfold my story:

Thebes was my birth-place—an unrivalled city,
With *many* gates, but here I might declare
Some strange plain truths, except that it were pity
To blow a poet's fabric into air;
Oh! I could read you quite a Theban lecture,
And give a deadly finish to conjecture.

But then you would not have me throw discredit
On grave historians—or on him who sung
The Iliad—true it is I never read it,
But heard it read when I was very young;
An old blind minstrel, for a trifling profit,
Recited parts—I think the *author* of it.

All that I know about the town of HOMER,
Is, that they scarce would own him in his day,
Were glad, too, when he proudly turned a roamer,
Because by this they saved their *parish-pay*;
His townsmen would have been ashamed to flout him,
Had they foreseen the fuss since made about him.

One blunder I can fairly set at rest;
He says that men were once more big and bony
Than now, which is a bouncer at the best,
I'll just refer you to our friend Belzoni,

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* It is well known that the Arabs, when in search of gain among the tombs, have, on returning the mummies, frequently put them into wrong cases.

Near seven feet high! in sooth a lofty figure!
Now look at *me*, and tell me, am I *bigger?*

Not half the size: but then I'm sadly dwindled
  Three thousand years, with that embalming glue,
Have made a serious difference, and have swindled
  My face of all its beauty—there were few
Egyptian youths more gay,—behold the sequel,
Nay, smile not, you and I may soon be equal!

For this lean hand did one day hurl the lance
  With mortal aim—this light fantastic toe
Threaded the mystic mazes of the dance:
  This heart hath throbbed at tales of love and wo,
These shreds of raven hair once set the fashion,
This withered form inspir'd the tender passion.

In vain! the skilful hand, and feelings warm,
  The foot that figured in the bright quadrille,
The palm of genius and the manly form,
  All bowed at once to Death's mysterious will,
Who sealed me up where Mummies sound are sleeping,
In cere-cloth, and in tolerable keeping.

Where cows and monkeys squat in rich brocade,
  And well-dressed crocodiles in painted cases,
Rats, bats, and owls, and cats in masquerade,
  With scarlet flounces and with varnished faces;
Men, birds, brutes, reptiles, fish, all crammed together,[*]
With ladies that might pass for well-tanned leather.

Where Rameses and Sabacon lie down,
  And splendid Psammis in his hide of crust:
Princes and heroes, men of high renown,
  Who in their day kicked up a mighty dust,—
Their swarthy Mummies kicked up dust in numbers,
When huge Belzoni came to scare their slumbers.[†]

Who'd think these rusty hams of mine were seated
  At Dido's[‡] table, when the wondrous tale
Of "Juno's hatred" was so well repeated?
  And ever and anon the queen turned pale;
Mean while the brilliant gas-lights, hung above her,
Threw a wild glare upon her shipwrecked lover.

Aye, *gas-lights!* mock me not; we men of yore
  Were versed in all the knowledge you can mention;
Who hath not heard of Egypt's peerless lore!
  Her patient toil? acuteness of invention?
Survey the proofs,—our Pyramids are thriving,—
Old Memnon still looks young, and I'M surviving.

A land in arts and sciences prolific,
  On blocks gigantic building up her fame!
Crowded with signs, and letters hieroglyphic,
  Temples and obelisks her skill proclaim!
Yet though her art and toil unearthly seem,
Those blocks were brought on RAIL-ROADS *and by* STEAM!

How, when, and why, our people came to rear
  The Pyramid of Cheops,[§] mighty pile!
This, and the other secret's thou shalt hear;
  I will unfold if thou wilt stay awhile,
The hist'ry of the Sphinx, and who began it,
Our mystic marks, and monsters made of granite.

Well, then, in grievous times, when king Cephrenes—
  But, ha! what's this—The shades of bards and kings
Press on my lips their fingers! What they mean is
  I am not to reveal these hidden things.
Mortal, farewell! Till Science' self unbind them,
Men must e'en *take* these secrets as they *find* them.

CHATEAUBRIAND.

This celebrated Frenchman, now advanced in age, has published a preface which is to be prefixed to his own memoirs, a work not to be given to the world till after his death. From this preface we make the following extracts, describing the extraordinary vicissitudes of his eventful life.

"I have explored the seas of the old and new world; I have trodden the soil of the four quarters of the globe: after having encamped under the hut of the Iroquois, and the tent of the Arab; in the wigwams of the Hurons; amid the ruins of Athens, of Jerusalem, of Memphis, Carthage, and Grenada; among the Greeks, the Turks, and the Moors; in forests and ruins, after having worn the bear-skin coat of the savage, and the silk caftan of the Mameluke; after having endured poverty, hunger, thirst, and exile, I have sat down minister, and ambassador, covered with gold embroidery, and decorated with orders and ribands, at the tables of kings, at the fetes of princes and princesses, to fall again into indigence and to taste the hardships of a prison.

"I have been connected with a multitude of persons celebrated in arms, in the church, in politics, in the magistracy, the sciences and the arts. I am in possession of immense materials; above four thousand private letters, the diplomatic correspondence of my several embassies, those belonging to the time when I was minister for foreign affairs, among which are unique and unknown documents belonging to myself. I have carried the musket of the soldier, the staff of the traveller, the wand of the pilgrim; a navigator, my fortunes have been as inconstant as my sail; a halcyon, I have made my nest upon the waves.

"I have been engaged in peace and war; I have signed treaties and protocols; and published, by the way, numerous works. I have been initiated into party, court, and state secrets; I have seen, close at hand, the most extraordinary reverses, the most exalted fortunes, the greatest reputations. I have been present at sieges, at congresses, at conclaves, at the re-edification and demolition of thrones. I have made history, and I could write it. And my solitary, contemplative, poetical life, passed through this world of realities, of catastrophies, of tumult, of noise, with the sons of my dreams, Chactas, Rene, Eudore, Aben-Hamet; with the daughters of my chimeras, Atala, Amelie, Blanca, Villede, Cymodocee. Within and beside my age, I perhaps exercised on it, without desiring or seeking it, a threefold influence—religious, political, and literary.

"The memoirs divided into books and parts, are written in different times and in different places; these sections naturally lead to a kind of prologues, which relate what has happened since the last dates, and describe the places where I resume the thread of my narrative; and the varied events and the changing forms of my life are thus blended together. It often happens that, in my moments of prosperity, I have to speak of the time of my misfortunes, and that, in my days of tribulation, I recall my days of happiness, and the diverse sentiments of the different periods of my life, my youth penetrating into my old age, the gravity of my years of experience casting a gloom over my lighter years—the rays of my sun, from its rising to its setting, crossing and mingling with each other, like the scattered lights of my existence, give a sort of undefinable unity to my work; my cradle has some affinity with my tomb, my tomb with my cradle; my sufferings become pleasures, my pleasures pains; and it cannot be discovered whether these memoirs are the work of a gray head."

A WIT.

A man that has once got his character up for a wit, is sure of a laugh, say what he may. He may utter as much nonsense as he pleases, and all will pass current. No one stops to question the coin of a rich man, but a poor man cannot pass off a joke or guinea, without its being examined on both sides. Wit and coin are always doubted with a thread-bare coat.

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[*] See BELZONI'S *Travels.*

[†] "After the exertion of entering into a burial-place, through a passage of six hundred yards in length, nearly overcome, I sought a resting-place, found one, and contrived to sit; but when my weight bore on the body of an Egyptian, it crushed it like a band-box. I then had recourse to my hands to sustain my weight, but they found no support. So I sank among the broken mummies with a crash of bones, rags, and wooden cases, which all together raised such a dust, as kept me motionless for a quarter of an hour, waiting till it had subsided."—BELZONI.

[‡] Should the reader detect some slight anachronism in the Mummy's Answer, he will please to remember, that in point of chronology, Virgil himself was not particular about a century or two. His, as well as Ovid's poetical fiction, representing Æneas as living in the age of Dido, involves an error of this kind, of nearly 300 years.

[§] This, the largest of the Pyramids, was reckoned one of the Seven Wonders of the World.

SECTION XIX.

[From the Western Monthly Magazine.]

WESTERN SCENERY.

(Concluded.)

The scenery of the prairie country excites a different feeling. The novelty is striking, and never fails to cause an exclamation of surprise. The extent of the prospect is exhilarating; the verdure and the flowers are beautiful; and the absence of shade, and consequent appearance of a profusion of light, produces a gaiety which animates the beholder.

It is necessary to explain that these plains, although preserving a general level in respect to the whole country, are yet in themselves not *flat*, but exhibit a gracefully waving surface, swelling and sinking with an easy slope, and a full rounded outline, equally avoiding the unmeaning horizontal surface, and the interruption of abrupt or angular elevations. It is that surface which, in the expressive language of the country, is called *rolling*, and which has been said to resemble the long heavy swell of the ocean, when its waves are subsiding to rest after the agitation of a storm.

It is to be remarked also, that the prairie is almost always elevated in the centre, so that in advancing into it from either side, you see before you only the plain, with its curved outline marked upon the sky, and forming the horizon, but on reaching the highest point, you look around upon the whole of the vast scene.

The attraction of the prairie consists in its extent, its carpet of verdure and flowers, its undulating surface, its groves, and the fringe of timber by which it is surrounded. Of all these, the latter is the most expressive feature—it is that which gives character to the landscape, which imparts the shape and marks the boundary of the plain. If the prairie be small, its greatest beauty consists in the vicinity of the surrounding margin of woodland, which resembles the shore of a lake, indented with deep vistas like bays and inlets, and throwing out long points, like capes and headlands; while occasionally these points approach so close on either hand, that the traveller passes through a narrow avenue or strait, where the shadows of the woodland fall upon his path,—and then again emerges into another prairie. Where the plain is large, the forest outline is seen in the far perspective like the dim shore when beheld at a distance from the ocean.—The eye sometimes roams over the green meadow, without discovering a tree, a shrub or any object in the immense expanse, but the wilderness of grass and flowers; while at another time, the prospect is enlivened by the groves which are seen interspersed like islands, or the solitary tree, which stands alone in the blooming desert.

If it be in the spring of the year, and the young grass has just covered the ground with a carpet of delicate green, and especially if the sun is just rising from behind a distant swell of the plain, and glittering upon the dew-drops, no scene can be more lovely to the eye. The deer is seen grazing quietly upon the plain; the bee is on the wing; the wolf with his tail dropped is sneaking away to his covert with his felon tread of one who is conscious that he has disturbed the peace of nature; and the grouse feeding in flocks or in pairs, like the domestic fowl, cover the whole surface—the males strutting and erecting their plumage like a peacock, and uttering a long, loud, mournful note, something like the cooing of the dove, but resembling still more the sound produced by passing a rough finger boldly over the surface of a tambourine. The number of these birds is astonishing. The plain is covered with them in every direction; and when they have been driven from the ground by a deep snow, I have seen thousands—or more properly tens of thousands—thickly clustered in the tops of the trees surrounding the prairie. They do not retire as the country becomes settled, but continue to lurk in the tall grass around the newly made farms; and I have sometimes seen them mingled with the domestic fowls, at a short distance from the farmer's door. They will eat and even thrive when confined in a coop, and may undoubtedly become domesticated.

When the eye roves off from the green plain to the groves or points of timber, these also are found to be at this season robed in the most attractive hues. The rich undergrowth is in full bloom. The red-bud, the dog-wood, the crab-apple, the wild plumb, the cherry, the rose, are abundant in all rich lands; and the grape vine, though its bloom is unseen, fills the air with fragrance. The variety of the wild fruit and flowering shrubs is so great, and such the profusion of the blossoms with which they are bowed down, that the eye is regaled almost to satiety.

The gaiety of the prairie, its embellishments, and the absence of the gloom and savage wildness of the forest, all contribute to dispel the feeling of lonesomeness, which usually creeps over the mind of the solitary traveller in the wilderness. Though he may not see a house nor a human being, and is conscious that he is far from the habitations of men, he can scarcely divest himself of the idea that he is travelling through scenes embellished by the hand of art. The flowers, so fragile, so delicate, and so ornamental, seem to have been tastefully disposed to adorn the scene. The groves and clumps of trees appear to have been scattered over the lawn to beautify the landscape, and it is not easy to avoid that decision of the fancy which persuades the beholder, that such scenery has been created to gratify the refined taste of civilized man.—Europeans are often reminded of the resemblance of this scenery to that of the extensive parks of noblemen which they have been accustomed to admire in the old world; the lawn, the avenue, the grove, the copse, which are there produced by art, are here prepared by nature; a splendid specimen of massy architecture, and the distant view of villages, are alone wanting to render the similitude complete.

In the summer the prairie is covered with long coarse grass, which soon assumes a golden hue, and waves in the wind like a ripe harvest.—Those who have not a personal knowledge of the subject would be deceived by the accounts which are published of the height of the grass. It is seldom so tall as travellers have represented, nor does it attain its highest growth in the richest soil. In the low wet prairies, where the substratum of clay lies near the surface, the centre or main stem of this grass, which bears the seed, acquires great thickness, and shoots up to the height of eight or nine feet, throwing out a few short coarse leaves or blades, and the traveller often finds it higher than his head as he rides through it on horse-back. The plants, although numerous, and standing close together, appear to grow singly and unconnected, the whole force of the vegetative power expanding itself upward. But in the rich undulating prairies, the grass is finer, with less of stalk, and a greater profusion of leaves. The roots spread and interweave so as to form a compact even sod, and the blades expand into a close thick sward, which is seldom more than eighteen inches high, and often less, until late in the season when the seed-bearing stem shoots up.

The first coat of grass is mingled with small flowers; the violet, the bloom of the strawberry, and others of the most minute and delicate texture. As the grass increases in size these disappear, and others, taller and more gaudy, display their brilliant colours upon the green surface, and still later a larger and coarser succession rises with the rising tide of verdure. A fanciful writer asserts, that the prevalent colour of the prairie flowers is in the spring a bluish purple, in midsummer red, and in the autumn yellow. This is one of the *notions* that people get, who study nature by the fireside. The truth is, that the whole of the surface of these beautiful plains is clad throughout the season of verdure with every imaginable variety of color, 'from grave to gay.' It is impossible to conceive a more infinite diversity, or a richer profusion of hues, or to detect any predominating tint, except the green, which forms the beautiful ground, and relieves the exquisite brilliancy of all the others. The only changes of color observed at the different seasons arise from the circumstance that in the spring the flowers are small and the colours delicate; as the heat becomes more ardent a hardier race appears, the flowers attain a greater size, and the hue deepens; and still later a succession of coarser plants rise above the tall grass; throwing out larger and gaudier flowers. As the season advances from spring to midsummer, the individual flower becomes less beautiful when closely inspected, but the landscape is far more variegated, rich, and glowing.

In the winter, the prairies present a gloomy and desolate scene. The fire has passed over them, and consumed every vegetable substance, leaving the soil bare, and the surface perfectly black. That gracefully waving outline which was so attractive to the eye when clad in green, is now disrobed of all its ornaments; its fragrance, its notes of joy, and the graces of its landscape have all vanished, and the bosom of the cold earth, scorched and discolored, is alone visible. The wind sighs mournfully over the black plain; but there is no object to be moved by its influence—not a tree to wave its long arms in the blast, nor a reed to bend its fragile stem—not a leaf nor even a blade of grass to tremble in the breeze. There is nothing to be seen but the cold dead earth and the bare mound, which move not—and the traveller with a singular sensation, almost of awe, feels the blast rushing over him, while not an object visible to the eye, is seen to stir. Accustomed as the mind is to associate with the action of the wind its operation upon surrounding objects, and to see nature bowing and trembling, and the fragments of matter mounting upon the wind as the storm passes, there is a novel effect produced on the mind of one who feels the current of air rolling heavily over him, while nothing moves around.

ARCTIC LAND EXPEDITION.

Despatches were received by the Royal Geographical Society from Capt. Back, and the following extracts containing the most interesting portions of his narrative, are published for the information of the public. It is gratifying to observe the good spirits in which he writes, and the entire success of the preliminary operations.

Fort Reliance, East end of Great Slave Lake, Dec. 7, 1833.

I overtook Mr. King at Cumberland house, and got him fairly off, with the two boats heavily laden with 124 packages of 90 lbs. each, by the 7th of June.

The accounts I had received from different persons of the low state of the water in some of the rivers, foreboded considerable detention to the boats; and, other circumstances considered, it was evident to me that they could not reach the eastern end of Slave Lake before the commencement of cold weather. Giving up all hope of seeing them again before the accomplishment of my plans, I stimulated my crew to the utmost, and actually worked them, until my arrival at Fort Chippewayan, which was about the end of July, for 18 hours a day. On my route I met Mr. M'Leod, an old acquaintance of mine, for whom I had a letter from the resident Gov. Mr. Simpson, intimating a wish that he should accompany the expedition, and I am sure you will be happy to learn that he immediately consented to place himself under my orders, and undertake the management of the Indians at our winter quarters.

On our reaching Fort Chippewayan, we made every inquiry relating to the direction of the rivers that debouched at or about the Fond du Lac, and though there evidently appeared to be a nearer way to the Barren Grounds than by the circuitous one originally intended to be followed, yet the vague and unsatisfactory answers of the Indians, together with their obvious ignorance of the distance to the Great Fish River, made me at once decide to go by Great Slave Lake.

It was the 7th of August when we landed at Fort Resolution, owing to the detentions incurred by sending to the Salt Plains, (a little to the westward of the Slave River,) for a winter's stock of that invaluable article.

Many Indians had assembled at this trading post, and their principal Chief, Le Grand Jeune Homme, was waiting my arrival, under a sort of promise held out to him that he should accompany me. But as I was fully aware that his services must be purchased at a greater rate than our limited means could afford, and that he knew nothing about the country to the eastward, I was glad to compromise the affair, and reward him for his loss of time by a present of the value of 40 beaver skins.

The season was advancing too fast to admit of any more delay, and being unable to procure a guide to the Thlew-ee cho-dezeth from among the Indians, not one of whom possessed a knowledge of its locality or direction, I determined on leaving Mr. M'Leod to bring the stores, while I preceded him in a half sized canoe, with a crew of two 'half breeds,' a Canadian, an Indian, and an Englishman. With this motley and most rickety craft I commenced the survey towards the north east. Our course first lay in the direction of the Riviere a Jean, and along the low swampy shores of the lake, then across to numerous islands, which led us to the north side of the lake. The scenery there was composed of the most craggy and picturesque rocks—mostly primitive, and consisting of flesh-coloured feldspar and quartz, with a few trees of inconsiderable size.

As we advanced, the appearance became more imposing, from the circumstances of the granite, or rather the last formation, yielding to the trap, which displayed itself in long parallel ranges of natural precipices, that not unfrequently extended to the horizon.

In two places the southern shore approaches within a mile of the northern, and the detroits thus formed have never been known to freeze.

More than one island had a columnar or basaltic form on the precipitous or south-west side. The water, unlike the turbid yellow we had left, was now of transparent blue, and so cold that ice often formed during the night.

I had now got to lat. 62 deg. 51 min. 40 sec. N., and long. 109 deg. 25 min. W. and could perceive a long blue point stretching to the S. E., which my Indian said we must round or make a portage to get to the eastern extremity of Great Slave Lake. 'There,' continued he, 'you will find a river which [I know not what the Great Chief may do] but we who are born here cannot ascend. Upon further inquiry I found he was right, and that some time would be saved by taking a more direct course, which could only be effected by following the uncertain trending of the stream that he called Hoar Frost River. On our rounding a point, this presented itself in a cataract of 70 feet descent, and discouraging as this was, and still more so the range of mountains through which it forced its passage, we commenced the operation of transporting the canoe and baggage over hill and valley, full 1700 feet, the greatest difficulty consisting in conveying the canoe through the fallen and entangled wood. The numerous rapids in the river annoyed and delayed us; but the next day we passed the last woods, and entered a large lake in the barren grounds. The lat. of its southern extremity is 63 deg. 24 min. 23 sec. N., long. 108 deg. 11 min. W., or a little to the northward of the Chesadawd Lake of Hearne, which, however, is not known by the natives.

In making a succession of portages from lake to lake, I crossed the same traveller's line of route, and fell on a lake of such magnitude as to be bounded on the East by the horizon. In a north-east direction it led us to a river, which we went up, and again launched the canoe on another extensive sheet of water. We were bewildered several times among islands and deep bays; still I kept going to the N. E. in which direction I was the more assured the river must be, from the general flatness of the surrounding land, and particularly from the north-west dip of a few sand hills that were occasionally seen to the northward.

After being three days on the same lake, I encamped on some sand hills at the bottom of the bay and despatched the men in two parties to look for the Thlew-ee-cho-dezeth, the source of which I accidentally discovered while occupied in taking some angles from the summit of the hill.

On the 3d day the people returned, having fallen on the river at some distance from us. The canoe was immediately carried to its streams, which is narrow in some parts, and connected with a chain of small lakes by detroits and rapids. I could not forget giving my poor voyageurs a glass of grog on this occasion, after which grateful ceremony we pursued the meanderings of the current, sometimes with ice on each bank, till the 1st September, when my little canoe was so shattered, the nights so cold, the country totally destitute of wood, and the men fairly exhausted, that I could not with any degree of prudence incur further risk this season.

The place whence I returned is in lat. 62 deg. 41 min. N. and long. 103 deg. 13 min. W., about 115 E. of Fort Enterprise, and only 109 miles from the nearest part of Bathurst inlet.

We had been 14 days without wood, and on the 5th of September got to the first dwarf pines, about two feet high, and on the 7th concluded the journey, by arriving at the east end of the Great Slave Lake, where I had previously directed Mr. M'Leod to commence the building of our establishment.

The two boats under Mr. King got to us exactly a week after, and it is satisfactory to state, that most of the stores &c. were undamaged.

Our winter-house I have called "Fort Reliance," from a feeling of dependence on that Providence which which will support us in every trial to which we may be exposed. It is situated on a sandy point in the deep bay, which receives two small rapid streams from the northward, and is surrounded by mountains and red miceous granite and gneiss.

"Fort Reliance is in lat. 62 deg. 48 min. 15 sec. N. and long. 109 deg. 10 min. W. the variation of the needle being 25 deg. 41 min. E.; and considering this and the entrance of the Mackenzie River, as the two extremes of the Great Slave Lake, it will be found to equal Lake Michigan in length, and may therefore be considered, as to size, the second lake in North America.

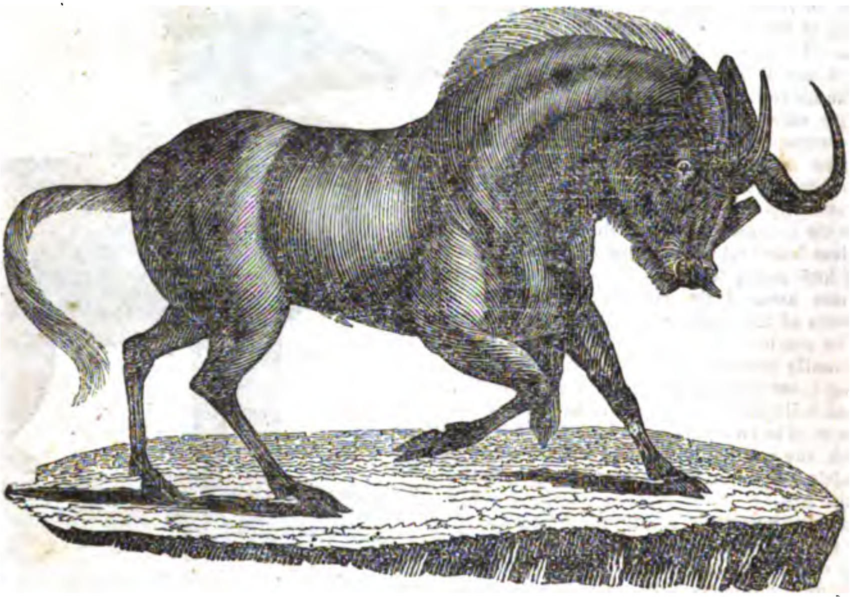
"I have a very compact observatory built where the needle is performing its diurnal functions with more or less regularity, according to the appearance of the aurora, or other atmospheric phenomena. The dip, magnetic force, &c. have also been ascertained; nor am I conscious of having omitted any thing that the friends and projectors of the scientific part of this expedition may have expected from me."

NATURAL HISTORY.

THE NYL-GHAU.

"This animal, the name of which is pronounced *nyl-gaw*, is a native of India. It is of a middle nature, between the cow and the deer, and carries the appearance of both in its form. In its size, it is as much smaller than the one as it is larger than the other; its body, horns, and tail, are like those of a bull; and the head, neck, and legs, are very like those of a deer. The colour, in general, is ash or gray, from a mixture of black hairs and white; all along the ridge or edge of the neck, the hair is blacker, larger, and more erect, making a short, thin, and upright mane. Its horns are seven inches long; they are six inches round at the root; growing smaller by degrees, they terminate in a blunt point. The bluntness of these, together with the form of its head and neck, might incline us to suppose it was of the deer kind; but as it never sheds its horns, it has a greater affinity to the cow.

"Their manners are harmless and gentle. Although in its native wildness it is said to be vicious, this seemed pleased with every kind of familiarity, and always licked the hand that stroked or gave it bread, and never once attempted to use its horns offensively; it seemed to have much dependence on its organs of smell, and snuffed keenly, and with noise, whenever any person came within sight; it did so likewise when any food or drink was brought to it; and was so easily offended with smells, or so cautious, that it would not taste the bread which was offered, when the hand happened to smell strong of turpentine. Its manner of fighting is very particular. It was observed, on putting two males in a little enclosure, that, while they were at a considerable distance from each other, they prepared for the attack, by falling upon their fore knees, then they shuffled towards each other, with a quick pace, keeping still upon their fore knees; and when they were come within some yards, they made a spring, and darted against each other. The intrepidity and force with which they dart against any object, appeared by the strength with which one of them attempted to overturn a poor labourer, who unthinkingly stood on the outside of the pales of its enclosures. The Nyl-ghau, with the quickness of lightning, darted against the wood-work with such violence, that he broke it to pieces, and broke off one of his horns close to the root, which occasioned the animal's death. In the English settlements of India they are considered as rarities, and are brought from the distant interior parts of the country. The Emperor sometimes kills them in such numbers, as to distribute quarters of them to all his omrahs; which shows that they are internally wild and in plenty, and esteemed good and delicious food. The Nyl-ghaus are quite common in Bengal; which gives room for a conjecture that they may be indigenous perhaps in the province of Guzarat, one of the most western and most considerable of the Hindostan empire, lying to the northward of Surat, and stretching away to the Indian ocean."



THE GNU OR GNOO.

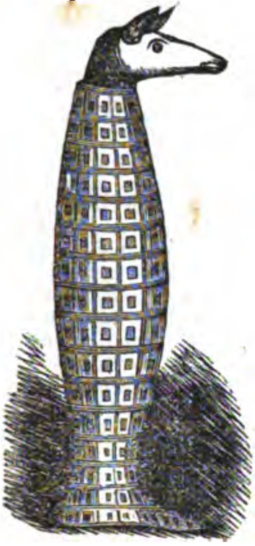
"This singular creature is described by travellers as resembling in form the horse, the ox, and the stag. It is about the size of a small horse, that is about four or five feet in height, and between five and six in length. The colour of the body, which is said to be finely proportioned is a dark brown. Its limbs are slender. Its neck is longer than that of the ox, but neither so long nor so slender as that of the horse. Like the horse it is adorned with a mane, which is stiff and erect. Its horns are singularly curved, being somewhat of the shape of the Greek letter upsilon. Its head, however, resembles most that of the ox species. Besides the mane, it has also on the breast a shaggy stiff hair, which is black, while the colour of the mane and tail is gray. It is a native of the southern parts of Africa, where it exists in a gregarious state, and in very large herds. It is a lively, capricious animal.

"The Gnu is thus described by Mr. Pringle, who had abundant opportunities of studying its habits at the Cape of Good Hope, and whose talents and observant spirit particularly qualify him to investigate and to communicate the result of his investigation. 'The curious animal called *Gnu* by the Hottentots, and *Wilde Beest* (i. e. Wild Ox) by the Dutch colonists, was an inhabitant of the mountains adjoining the Scottish settlement at Bavian's river, and I had therefore opportunities of very frequently seeing it both singly and in small herds. Though usually, and perhaps correctly, by naturalists ranked among the antelope race, it appears to form evidently one of those intermediate links which connect, as it were, the various tribes of animals in a harmonious system in the beautiful arrangement of nature. As the *hyæna dog*, or '*wilde hond*' of South Africa, connects the dog and wolf tribe with that of the hyæna, in like manner does the Gnu form a graceful link between the buffalo and the antelope. Possessing the distinct features which, according to naturalists, are peculiar to the latter tribe, the Gnu exhibits at the same time in his general aspect, figure, motions, and even the texture of his flesh, qualities which partake very strongly of the bovine character. Among other peculiarities, I observed, that, like the buffalo or the ox, he is strangely affected by the sight of scarlet; and it was one of our amusements when approaching these animals to hoist a red handkerchief on a pole, and to observe them caper about, lashing their flanks with their long tails, and tearing up the ground with their hoofs, as if they were violently excited, and ready to rush down upon us; and then all at once, when we were about to fire upon them, to see them bound away, and again go prancing round us at a safer distance. When wounded, they are reported to be sometimes rather dangerous to the huntsman; but though we shot several at different times, I never witnessed any instance of this. On one occasion, a young one, apparently only a week or two old, whose mother had been shot, followed the huntsman home, and I attempted to rear it on cow's milk. In a few days it appeared quite as tame as a common calf, and seemed to be thriving; but afterwards, from some unknown cause, it sickened and died. I heard, however, of more than one instance in that part of the colony, where the Gnu, thus caught young, had been reared with the domestic cattle, and had become so tame as to go regularly out to pasture with the herds, without exhibiting any inclination to resume its natural freedom; but in consequence of a tendency which the farmers say they evinced to catch, and to communicate to the cattle, a dangerous infection, the practice of raising them as curiosities has been abandoned. I know not if this imputation be correct, but it is true that infectious disorders do occasionally prevail to a most destructive extent among the wild as well as the domesticated animals in South Africa, and especially among the tribes of larger antelopes, who suffer exceedingly.

"'There is another species of Gnu found farther to the northward, of which I saw a single specimen in the colony, which, in the shape of the horns, and some other particulars, still more resembles the ox. This species has been described by Burchell, under the name of *antilope taurina.*'"

HISTORY.

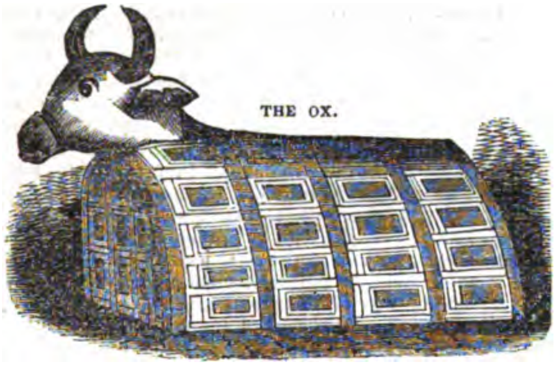
THE FOX.



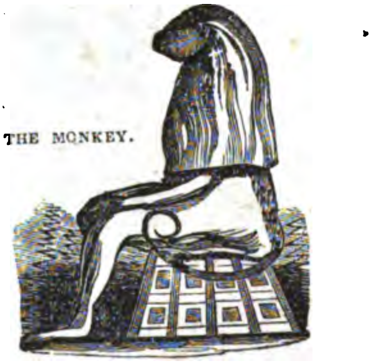
THE IBIS.

THE CAT.

THE RAM.

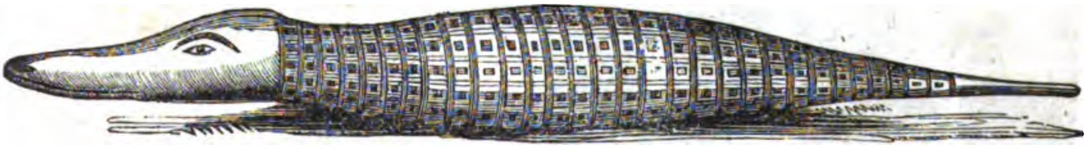


THE OX.



THE MONKEY.

THE CROCODILE.



EGYPTIAN MUMMIES, MANUFACTURES, &c

Belzoni saw some mummies with sandals of coloured leather on the feet, and bracelets on the arms and wrists. He tells us that the coffins were always placed horizontally, in rows, within the sepulchres. He entered some tombs, which contained the mummies of inferior creatures, (mingled with those of human beings,) such as bulls, cows, monkeys, dogs, cats, crocodiles,* fish, and birds; and one tomb was filled with nothing but cats, carefully folded in red and white linen, the head covered by a mask, representing the cat within.* For a specimen of these instances of "solemn mockery," we refer to the prints on the preceding page; they are taken from the engravings which illustrate Belzoni's travels, and represent the embalmed bodies of some of the animals held sacred in ancient Egypt.

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* The Crocodile was held sacred at Thebes, Ombos, in the environs of Lake Moeris, and in other parts of Egypt. At Arsinoe, the priests nourished one, to which the name of Suchus was given; it was fed upon bread, flesh, and wine, offered to it by strangers; it was preserved in a particular lake, and, whilst reposing, the priests approached the animal, opened his mouth, and put the food within its jaws; after his repast, it usually descended into the water, and swam away, but it would suffer itself to be handled; and pendants of gold and precious stones were placed about it. Strabo relates that his host, a man of consideration, conducted him and his companions to the lake, and there he saw the Crocodile at the border; that one of the priests to whom was intrusted the care of the animal, opened his mouth and placed within it a cake, another a portion of flesh, and a third poured in some wine. The repast thus made, the animal passed over to the other side, to receive from other hands similar marks of attention.—Pettigrew.

Enough has now been stated, to convey some general information on these curious and interesting points. But we cannot conclude without remarking, that, ancient as was the custom of embalming the human body, that of interment is certainly the *most* ancient, and religious. It restores to the earth what was originally taken from it. And surely we can never dwell on the besotted ignorance and superstition of heathen people, without a feeling of gratitude for the blessings we enjoy as Christians. We are thus reminded, also, of the reasonableness, nay, the necessity, of that distinct Revelation which God made to man. For here we observe that, with all their boasted skill, a mighty people "became vain in their imaginations, and their foolish heart was darkened. Professing themselves to be wise, they became fools, and changed the glory of the incorruptible God into an image made like to corruptible man, and to birds, and four-footed beasts, and creeping things." How important, then, how necessary, were the divinely vouchsafed means of "CASTING DOWN *imginations* and every high thing that exaleth itself against the knowledge of God."—*Lond. Sat. Mag.*

BIOGRAPHY.

WHITTINGTON AND HIS CAT.

Great London city, thrice beneath his sway
Confirm'd the presage of the happy day,
When echoing bells their greeting thus begun,
"Return, thrice Mayor! Return, oh Whittington.—BISHOP.

We here present to our readers "the true portraiture" of the renowned Sir Richard Whittington, knight; the greatest Lord Mayor that ever lived; clad in the ancient costume, and attended by his distinguished favourite, the idea of which is always connected in our minds with this famous Lord Mayor, "all of the olden time." It is taken from an old print by *Elstrack;* and it is a curious fact, that the knight's hand formerly leaned upon a human skull, for which a cat was afterwards substituted. In illustration of the subject, we extract from an ingenious and spirited little volume, lately written by Mr. Keightly.

Richard Whittington was born in the year 1360. He followed the business of a mercer in the city of London, and acquired great wealth. Having served the office of sheriff with great credit, in the year 1393, he was chosen Lord Mayor, and filled that office not less than three times, namely, in the years 1397, 1406, and 1419. He was knighted, it is said, by King Henry the Fifth, to whom he lent large sums of money for his wars in France; and he died full of years and honours in 1425.

"This year," (1406,) says Grafton, "a worthy citizen of London, named Richard Whittington, mercer and alderman, was elected Mayor of the said city, and bore that office three times. This worshipful man so bestowed his goods and substance to the honour of God, to the relief of the poor, and to the benefit of the commonweal, that he hath right-well deserved to be registered in the book of fame. First he erected one house, a church, in London, to be a house of prayer, and named the same after his own name, Whittington College, and so it remaineth to this day; and in the said church, beside certain priests and clerks, he placed a number of poor aged men and women, and builded for them houses and lodgings, and allowed unto them wood, coal, cloth, and weekly money, to their great relief and comfort. This man, also, at his own cost, builded the gate of London, called Newgate, in the year of our Lord, 1422, which before was a most ugly and loathsome prison. He also builded more than half of Saint Bartholomew's Hospital, in West-Smithfield, in London. Also he builded, of hard-stone, the beautiful library in the Grey Friars, in London, now called Christ's Hospital, standing in the north part of the cloister thereof, where in the wall, his arms are graven in stone. He also builded, for the ease of the mayor of London, and his brethren, and of the worshipful citizens, at the solemn days of their assembly, a chapel adjoining to the Guildhall; to the intent they should ever, before they entered into any of their affairs, first go into the chapel, and by prayer, call upon God for his assistance. And in the end, joining on the south side of the chapel, he builded for the city a library of stone, for the custody of their records and other books. He also builded a great part of the east end of Guildhall, beside many other good works I know not. But among all others, I will show unto you one very notable, which I received credibly by a writing of his own hand, which also he willed to be fixed as a schedule to his last will and testament. He willed and commanded his executors, as they would answer before God at the day of resurrection of all flesh, that if they found any debtor of his that ought to him any money, if he were not, in their consciences, well worth *three times as much*, and also out of the debt of other men, and well able to pay, that then they should never demand it, for he clearly forgave it, and that they should put no man in suit for any debt due to him. *Look upon this, ye aldermen, for it is a glorious glass!*"

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* Innumerable heaps of cats, in an embalmed state, have been discovered in certain districts. "The carcasses of dead cats," says Herodotus, "are removed into sacred apartments, and after they have been embalmed, they are reverently entombed in the town of Bubastis. This animal was held by these idolaters sacred to the moon." If a cat was killed, either designedly or by accident, the unfortunate offender was punished with death. They must have had plenty of these animals. How strange it seems, that at a city in Egypt, in the reign of Tiberius, 7000 Romans were killed by the Egyptians, in a tumult, because a Roman soldier—had killed a cat!

Stow informs us, that Richard Whittington rebuilt the parish church of St. Michael Royal, and made a college of St. Spirit and St. Mary, with an almshouse, called God's House or Hospital, for thirteen poor men, who were to pray for the good estate of Richard Whittington, and of Alice his wife, their founders; and for Sir William Whittington, knight, and Dame Joan his wife; and for Hugh Fitzwarren, and Dame Malde his wife, the fathers and Mothers of the said Richard Whittington, and Alice his wife; for King Richard the Second, Thomas of Woodstock, &c. Hence it clearly follows, that Sir Richard Whittington never could have been a poor bare-legged boy; for it is here plainly asserted that his father was a knight, no mean distinction in those days. Yet in every popular account of Whittington, he is said to have been born in very humble circumstances. This erroneous idea has evidently been owing to the popular legend of him and his cat, and it shows how fiction will occasionally drive truth out of her domain. Such, then, is the real history of this renowned Lord Mayor; but tradition, we know, tells a very different tale: and it is as follows.

Dick Whittington, a poor orphan boy, came up to London from the country, and a rich merchant, named Fitzwarren, took compassion on him, and put him into the kitchen under his cook, who treated him harshly: but Miss Alice, his master's daughter, showed him much kindness. The rats and mice that swarmed in the garret where he slept led him a wretched life, till, with a penny he had gotten, he purchased a cat. Dick's master, Mr. Fitzwarren, was shortly afterwards sending a ship to sea, and he gave all his servants permission to send out a venture in her. Poor Dick had no property on earth but his cat, and, by his master's orders, he fetched her down from his garret, and committed her to the captain with tears in his eyes, for he said he should be kept awake all night by the rats and mice. All laughed at Dick's venture, but Miss Alice kindly gave him money to purchase another cat.

The ship was driven to the coast of Barbary, and the captain having sent out specimens of his cargo to the king of the country, he and his chief mate were invited to court, where they were royally entertained; but the moment the dishes were set on the table, rats and mice ran from all sides and devoured what was on them. The captain was told, that the king would give half his wealth to be delivered of this torment; and, instantly recollecting poor Dick's cat, he told the king that he could destroy them. He went down to the ship, and fetched up Puss under his arm. The tables were covered once more, and the usual havoc begun, when the cat jumping among the depradators, made a carnage of them, which amazed all present. The king, out of gratitude, purchased the whole ship's cargo, and gave, over and above, a great quantity of gold for the cat, and the captain set sail for England.

To whom is the subsequent history of Richard Whittington unknown? Who knows not how, during the absence of the ship, he ran away from the ill-treatment of the cook, and had gotten as far as Halloway, when he sat down on the stone, on the site of which is one called at this very day "Whittington's Stone[*]," and heard Bow-bells ring out,

Turn again Whittington,
Thrice Lord Mayor of London!

and how he married good Miss Alice, and became in reality Lord Mayor of this great city?

In the whole of this legendary history there is, we may see, not one single word of truth further than this,—that the maiden name of Lady Whittington was Alice Fitzwarren. It is really deserving of attention, as an instance of the manner in which tradition will falsify history; and it would be extremely interesting to ascertain the exact age of the legend. Neither Grafton nor Hollingshed, who copies him, says any thing of the legendary history of Sir Richard; but it must have been current in the reign of Elizabeth, for in the Prologue to a play, written about 1613, the citizen says; "Why could you not be contented, as well as others, with the legend of Whittington? or the life and death of Sir Thomas Gresham, with the building of the Royal Exchange? or the story of Queen Eleanor, with the rearing of London Bridge upon woolsacks?" The word *legend* in this case would seem to indicate the story of the cat; and we cannot, therefore, well assign it a later date than the sixteenth century.

Cats, we know, fetched a high price in America, when it was first colonized by the Spaniards. Two cats, we are told, were taken out on speculation to Guyana, where there was a plague of rats, and they were sold for a pound of gold. Their first kittens fetched, each, thirty pieces of eight, the next generation went for about twenty, and the price gradually fell, as the colony became stocked with them. The elder Almagro is also said to have given six hundred pieces of eight, to the person who presented him with the first cat which was brought to South America. On reading this, we might feel disposed to assign a historical foundation to the legend of Whittington and his Cat; but it is more probably an independent British fiction.

It is strange what a propensity there is to assign some other cause for the acquisition of riches, than industry, frugality, and skill, (the usual and surest road to wealth.) I hardly ever knew, in my own country, says Mr. Keightly, an instance of a man who, as the phrase goes, "had risen from nothing," that there was not some extraordinary mode of accounting for his attainment of wealth. The simple and most usual explanation of the wonder was, to assert that he had gotten *a treasure* some way or other. Thus, for example, I once knew a man whose original name had been Halfpenny, (when he rose in the world he refined it to Halpen,) and who had grown rich from the humblest means. I was, one day, when a boy, speaking of him and his success in the world to our gardener. "Sure then you are not such a *gommaril*, (fool,) Sir," said he, smiling at my simplicity, "as to believe it was by honest industry he made all his money? I'll tell you, Sir, how it *raley* was; you see he sent one time to the Castle for a keg of half-pence, and, by the laws! what did they send him, in mistake, but a keg full of *goulden* guineas! And Jemmy, you see, was *cute*, and he kept his own secret, and by degrees he throve in the world, and became the man he is. That's the *rale* truth of it for you." Here, then, we have an instance of the name giving occasion to the legend.

Other persons have a wonderful inclination to discover a ground work of historical truth in popular legends. Whittington's cat has not escaped their shrewdness, for in some popular *History of England*, the story has been *explained*, as it is called; and two or three country newspapers have copied the explanation with evident delight. Sir Richard Whittington was, it seems, the owner of a *ship* named the CAT, by his traffic in which he acquired the greater part of his wealth. It is not, however, quite clear, that our worthy mercer was directly engaged in foreign traffic.

Sat. Mag.

ORIGIN OF NEGRO SLAVERY.

Mr. Bancroft, in the first volume of his History of the United States, gives an account of the early traffic of the Europeans in Slaves. In the middle ages the Venetians purchased white men and Christians, and others, and sold them to the Saracens in Sicily and Spain. In England, the Anglo-Saxon nobility sold their servants as slaves to foreigners.—The Portuguese first imported negro slaves from Western Africa into

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[*] In the immediate neighbourhood of this, just at the foot of Highgate Hill, is the neat and comfortable college, lately erected called Whittington's College, in the centre of the principal court of which is a figure of the founder, as "a bare-legged boy" sitting on the Holloway stone.

Europe in 1442, Spain soon engaged in the traffic, and, negro slaves abounded in some places of that kingdom. After America was discovered, the Indians of Hispaniola were imported into Spain and made slaves.—The Spaniards visited the coast of North America, and kidnapped thousands of the Indians, whom they transported into slavery in Europe and the West Indies. Columbus himself enslaved 500 native Americans, and sent them into Spain, that they might be publicly sold at Seville.—The practice of selling North American Indians into foreign bondage continued for nearly two centuries. Negro slavery was first introduced into America by Spanish slaveholders, who emigrated with their negroes. A royal edict of Spain authorized negro slavery in America in 1503. King Ferdinand himself sent from Seville 50 slaves to labour in the mines. In 1511, the direct traffic in slaves between Africa and Hispaniola was enjoined by a royal ordinance. Las Cassas, who had seen the Indians vanish away like dew before the cruelties of the Spaniards, suggested the expedient that the negroes, who alone could endure severe toils, might be still further employed. This was in 1517.—The mistaken benevolence of Las Casas extended the slave trade, which had been previously established.

Sir John Hawkins was the first Englishman that engaged in the slave trade. In 1562 he transported a large cargo of Africans to Hispaniola. In 1567 another expedition was prepared, and Queen Elizabeth protected and shared in the traffic. Hawkins, in one of his expeditions, set fire to an African city, and out of 8000 inhabitants, succeeded in seizing 250. James Smith of Boston and Thomas Keyser first brought upon the colonies the guilt of participating in the African slave trade. In 1645 they imported a cargo of negroes from Africa.—Throughout Massachusetts the cry of justice was raised against them as malefactors and murderers; the guilty men were committed for the offence, and the representatives of the people ordered the negroes to be restored to their native country at the public charge. At the latter period there were both Indian and negro slaves in Massachusetts. In 1620 a Dutch ship entered James River, and landed 20 negroes for sale. This is the sad epoch of the introduction of negro slavery into Virginia. For many years, the Dutch were principally concerned in the slave trade in the market of Virginia.

Northampton Gazette.

[From the North American Review.]

PROGRESS OF SOCIETY.

We know not a more glorious thought, and we believe it to be true,—one that should move, animate, and inspire, while it awes and controls us,—than this:—that free principles of government, liberty of opinion and action upon our rights and duties, are but a part, a wider extension of that stupendous, yet beautiful plan, which originated in Judea on the birthday of our Saviour. We know not a more glorious thought, and we believe it to be true,—than that Christianity and republican institutions, as far as they are based upon the same foundation of universal liberty and personal responsibility, as far as the design of both is to elevate man by giving him his free course, are to walk hand in hand through the earth, brethren of the same family, children of the same Father. Christianity, we know, was the elder and stronger,—the nobler and more exalted brother,—and it was meet, therefore, that it should lead the van as it did in the march of reformation—for that reformation began at a time when its younger and weaker brother, political freedom, would have been overwhelmed and crushed. The battle to be fought was tremendous, and it was fit that something more than human should come forth to meet its brunt. And Christianity came forth to meet it. It came forth to battle with men's prejudices and passions, to dispel the mists, to scatter the rubbish, and to teach them—what has proved their hardest lesson—themselves. And when it had opened a way, and when all things were ready, it called to its younger brother to come out to its aid. And that brother has gone forth. The time, we say, has come, and these two pioneers of liberty have joined their hands—friends, compeers, and fellow labourers—and they are going onward, each encouraging and supporting the other, and both enlightening and emancipating the world.

Population.—A square mile contains 3,097,600 square yards, and at the rate of four persons, large and small, to a square yard, 12,390,400 human beings. Thus the swarming population of the United States could be crowded, without inconvenience, into a square mile, and could be walked round in an hour. In like manner the host of Xerxes, of which the Grecians represent one end as seeing the sun rise, and the other as seeing him at the same instant set, could have been ranged in close order on a field of a hundred acres, and could have all heard the voice of one speaker. The inhabitants of the whole earth, about nine hundred millions, would not fill a circle of ten miles in diameter; they might, therefore, be ridden round in an hour by Osbadelston, and might hear a bell placed in the centre.

STUDY INDISPENSABLE TO GREATNESS.

It is a fact well worthy the attention of young men, who have the misfortune to consider themselves as *great geniuses*, that nearly all the master spirits of the British parliament have been distinguished as scholars, before they became eminent as statesmen. If Sheridan is urged as an exception, let it be remarked, that only *one* Sheridan has ever been heard on the floor of St. Stephen's; and that the splendid and terrible assailant of Warren Hastings sunk at last into a mere writer of comedies, and manager of a play-house. Chatham, and Pitt, and Fox, and Burke, and Canning, and Brougham, with many others, whose names shine with a lustre only a little inferior to those above mentioned, were distinguished for their classical attainments. They laid the foundation of their future greatness in the cloisters of the university. Since the world began, genius has accomplished nothing without industry; and no error can be more fatal to the young aspirant after distinction and usefulness, than that indolent self-complacency which rests on the supposed possession of exalted genius.

POETRY.

SATURDAY EVENING.—By Bulwer.

The week is past, the Sabbath dawn comes on,
Rest—rest in peace—thy daily toil is done;
And standing, as thou standest, on the brink
Of a new scene of being, calmly think
Of what is gone, is now, and soon shall be,
As one that trembles on eternity.
For sure as this now closing week is past,
So sure advancing Time will close my last—
Sure as to-morrow, shall the awful light
Of the eternal morning hail my sight.

Spirit of good! on this week's verge I stand,
Tracing the guiding influence of thy hand;
That hand which leads me gently, calmly still,
Up life's dark, stony, tiresome, thorny hill,
Thou, thou in every storm hast sheltered me
Beneath the wing of thy benignity:
A thousand graves my footsteps circumvent,
And I exist—thy mercy's monument!
A thousand writhe upon the bed of pain;
I live—and pleasure flows through every vein.

Want o'er a thousand wretches waves her wand;
I, circled by ten thousand mercies, stand;
How can I praise thee, Father! how express
My debt of reverence and of thankfulness!
A debt that no intelligence can count,
While every moment swells the vast amount,
For the week's duties thou hast given me strength,
And brought me to its peaceful close at length,
And here my grateful bosom fain would raise
A fresh memorial to thy glorious praise.

SECTION XX.

DESCRIPTION OF CARTHAGENA.

[The following letter, which we publish from MS. is from the pen of Abram Kashow, late of this city, who died of the yellow fever at Carthagena, on the 12th of September last, a brief sketch of whose character has been handed us for insertion, by one who was for many years an intimate friend of the deceased.

To the Editor of the Family Magazine.

Most of the enclosed sketch I found some months since in the biography of another individual. It was so faithful in the description of the character of my late friend that I have extracted it, and with some necessary emendations and additions, send it to you for publication. S.

Abram Kashow was born on the 15th of February, 1810, and was by birth a member of the Society of Friends. At an early period of his life he evinced a strong disposition to acquire knowledge, which he took every opportunity to gratify, and which continued to the time of his latest moments. His acquirements were extensive for one of his years. He was an excellent English scholar; and his views of general science, if not minute and extensive, were various and judicious. He was familiar with all the standard works in the English language, and quoted them with promptness and aptitude. He read French with a good degree of fluency, and at the time of his death had made great progress in the Spanish. In the Science of the Philosophy of the Mind he was an early and devoted scholar. He read with avidity every work on the subject in our language, and many in the French.

In the summer of 1833 he embraced an opportunity which presented to go to Carthagena, as a clerk in an extensive mercantile house in that place, and died in two months after his arrival.

The news of his death cast a gloom on the society of his youth, for he had thousands of friends, but no enemies. His talents had attracted their attention, and the sweetness of his disposition, with the delicacy of his manners, secured their affections. As a member of society he was useful beyond most persons of his years—and this usefulness was accompanied by large promises of future greatness. As a friend he was inestimable, for he was not subject to a caprice of feeling which often blights the best affections of the young, and diminishes the value of human life. As a son he was all a fond father could desire, for his virtues delighted a parent's heart, and his talents gratified his ambition. He saw him filling a large space in society, and every day advancing in improvement. The death of such a son paralyzes some of the best pulses of a parent's heart, and dims all his earthly visions.]

Carthagena, July 10*th*, 1833.

Dear Brother,

The Medina will sail on Sunday, and therefore I commence now to write you a long letter describing my first impressions of this place, and my adventures on the great deep.—This letter must suffice for all my friends, who wish to know any thing about me; and and to such as desire to see it, I wish you to show it.—My time is now entirely occupied in studying the language, and it would take far too much of it to give the same particulars to all.

First then, for my sea adventures—These may be briefly detailed; sea-sickness, and occasional shower baths in the shape of a shipped sea, with a great deal of nothing to do, or rather, a great deal of the disposition to do nothing, reading every book of a light kind I could get hold of two or three times over, as our library was rather limited.—This constituted nearly the whole of my doings and feelings at sea.—We had no heavy gales, no long calms, saw no sharks, caught no dolphins, were chased by no pirates, and spoke but one vessel, which we did on the second day out,—in short, it was one of your matter-of-fact voyages, furnishing no incidents to fill up a journal—My sea-sickness lasted from the time we left the Hook, until we had been a week at sea, recurring every time we had the weather at all rough—I think I was not in a good state of body when I left, as the great deal of running about I had to do on Saturday fatigued me very much, else I think I might have stood it better.—Our vessel was so small too! (only 160 tons,) that she pitched about at a great rate; however she was a good sailer, a brigantine of the Water Witch class, and could almost put the wind's eye out. She bounded over the waves, or if that did not suit her so well, she went through them, deluging her deck, large quantities of water pouring down into the cabin, when our only place of retreat was our berths, to wait patiently for better times, for this was in rough weather.

The common way of going from New-York to Carthagena is by the windward passage between St. Domingo and Porto Rico, but the Capt. determined to try the other between Cuba and St. Domingo, called the "Turk's Island passage," which is nearer than the other, though the winds are not so favourable. We made Turk's Island on Friday, the 28th; a barren looking place, sandy and very low; one ship was laying off, loading with salt, of which you know vast quantities are made here. We could see large heaps of it piled up along the shore, ready for embarkation. The water is evaporated entirely by means of the sun, which of course in this tropical region is very powerful. The same day we passed over the S. eastward edge of the Caycos Bank. The water was very clear: we could see the bottom even in 10 or 15 fathoms. At sunrise the next morning we saw St. Domingo, and the same day Cuba, on the starboard. We were at no less than 12 or 15 miles from either; consequently I could make out very little of the appearance of the coasts. Sunday all day we were becalmed off the small Island of Navaza, which is uninhabited except by birds,—the S. western extremity of St. Domingo still in sight. A breeze came to our relief; that night at 12 o'clock we lost sight of St. Domingo; and Wednesday at noon we made the "Spanish Main" near Carthagena, thus crossing the whole Caribbean sea, a distance of 600 miles, in 60 hours. We passed the city about 6 o'clock, on our way to the entrance of the harbour, which is ten miles below. The city of Carthagena lies along the coast, but all vessels are obliged to come into the harbour, as the surf makes it impossible to land on the sea side.—The mouth of the harbour is defended by two strong forts, one on each side; it then extends nearly parallel with the shore, quite up to the town, and a small river, which empties into this, runs up to a lake a few miles in the interior, having communication at various places with the sea, thus making Carthagena an island.

We entered the harbour about eight o'clock, were hailed by the fort, and came to anchor to wait for a pilot. He came off in the morning from a small village near the Fort, called Bocha Chica, the houses of which are built close down to the water, of bamboo or stone, thatched with a kind of palm, called here *palmetto.* The roofs are very low, the eves being only six or seven feet from the ground, like an old Dutch barn. The pilots here are all black, and receive a regular salary. The pilotage, which is not charged by the tonnage as in the U. S. is collected by the government, being eight dollars out and in for vessels of all sizes. This morning a great number of pelicans were flying about the harbour in all directions. They seemed as large as domestic geese, very clumsy in their movements and ungainly in their appearance. This day was the 4th of July, and the captain thereupon fired a salute of four guns, which was the whole number of cartridges we could muster. The anchorage for the shipping is about one mile from the town, where they are loaded or unloaded by lighters called Bungos, large canoes scooped out of a single log, and manned by blacks, who perform all the hard labour here. The whole shipping in the harbour when we came to anchor was four schooners, one of them a French cruiser. We were boarded by the custom-house boat, having on board the Collector, Captain of the Port; Doctor, Inspector, Interpreter, and half-a-dozen officers more of various grades; for it seems they all turn out on such occasions:—rowed by eight negroes fancifully dressed. They were very fearful of the cholera, and kept the boat off at oar's length, until they had read the bill of health, seen the list of the crew, and had the Jacks called to the side to see if all was right, and nothing *choleric* in their phizes. Being satisfied, they at length ventured on board, took the letter-bags, sealed down the hatches, drank some wine, for which they seemed to have a particular gusto, and left us. I was not allowed to go ashore that night, as it was necessary to have a permit to land, and it was too late to get one. All their forms of business are most perplexing and tedious.

In the morning I went on shore with the captain who introduced me to Mr. D———, Mr. B———'s agent, and with whom I am to take up my residence. He is a man whose manners and appearance I like very much. * * * * I found him in great perplexity for want of assistance. He has always employed two clerks, and had sufficient for them to do in this climate, where a man is expected to do very little.

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Carthagena is said to be more strongly-fortified than any other city in the two Americas. The wall which surrounds it has a circumference of nearly three miles; it is on an average 30 feet high and 30 feet wide the whole distance, i. e. along its plain extent; but wherever there are bastions, portals, angles, (I don't know the terms,) the walls in these places are sometimes 100 or 200 feet wide. One is absolutely astonished at the vastness and strength of these fortifications. There is one at the N. and N. W. part where the wall is nearly 100 feet wide for an extent of about 2000 feet, and must be at least 40 feet high; with a bastion at the angle extending out into the sea more than 150 feet. Underneath a part of this wall are said to be 7 or 800 rooms, where the galley prisoners are confined, and over these cells, on the top of the wall, there is an oblong space of about 700 feet long and nearly 100 wide, paved with large bricks, which was used by the old Spaniards, and is still used on some occasions, as a ball-room, or rather a ball-floor, there being no room in the question—and I cannot conceive a more magnificent one, when we consider the size and the prospect it commands;—over head the starry vault of heaven; on one side the city with its living thousands, and on the other the vast expanse of ocean, with the surf driven by the eternal trades foaming and thundering against the rocks, and dashing its spray half way up the wall. It is a beautiful promenade just at sunset, which is seen in all its splendour from this place. One must see in order to appreciate all the splendour of a Tropical sunset. The tints are far more glowing and delicate, and the clouds assume the most fantastic shapes. At sea I used to watch with the greatest pleasure the gradual change of colours which the heavens put on ere they all faded from the horizon. There was one peculiarity I noticed that I had never seen before. After the sun had sunk apparently to his bed in the ocean, the heavens in that quarter became coloured with the most delicate vermillion, in separate radii, diverging from the sun—and these were not pencils of light, but large fields converging to a point at the horizon, the blue sky being seen between them at regular intervals, and five or six of them occupying the whole field.

There is at the back of the town, across the river, a citadel called Fort San Philip, an immense mass of stone and brick work, having a circumference of nearly a mile, and towering far above the city, which it commands completely. The building of this must have required as much time and labour as the city walls. These massive and vast fortifications are said to have cost the lives of more than fifty thousand Indians, who were compelled by the old Spaniards to perform all the labour, and who died by thousands, in building up the strong holds of their enslavers.

It is impossible to describe, so as to make you understand, the great difference between a Spanish town in S. America, and New York. The streets are very narrow and have no side-walks. The houses are all built of stone or brick, with tiled roofs, the walls covered with stucco. The best houses are two or three stories high. I believe our house is a very good specimen of the whole, though as yet I have been out but little, and therefore am not very well qualified to judge of the internal arrangements of others. I will however describe ours as near as I can. It is built in the shape of an L, having an inner paved court; the lower story is used as store-rooms, stable, &c. and the upper for dwelling rooms; all the floors are paved with brick, dining, sitting, sleeping, and all. They have of course no glazed sashes, but their windows have bars running across them like prison-grates. There is generally a balcony built from the second or third story, which is a favourite sitting place of the ladies; you may see them there at all times of day except siesta time, which is from 12 to 2 o'clock, busily engaged in sewing and talking with Spanish fluency, or in dressing their hair, of which they are very proud, and which is generally long, fine, and black as the "raven's wing."

The streets present a singular spectacle to a northerner. You see priests with their long, flowing, black dresses, and black hats with a low crown, a trim turned up over the crown at the sides, and extending out nearly a foot before and behind, in shape the same as the *sombrero* of Doctor Bartolo, but exceeding that worthy's in dimensions. Donkeys but little larger than a six month's calf, with a load of grass, Indian corn, dyewood, hides, charcoal, or some other country production, apparently as large as themselves, placed upon their backs, and above this a great negro or wench with legs crossed over the animal's neck, guiding or urging him along with a pointed stick. Children running about entirely naked,—this is a universal practice; all children from infancy to four or five years, and the majority to ten, twelve, and fifteen, never have a vestige of clothing. Then there are *volantes*, a kind of chaise drawn by one horse, the negro driver riding on the horse's back. Water is peddled about the streets by negroes, crying out *el aqua*, (the Spanish for water.) Rain-water is alone used here—they have no other; this is caught in large cisterns or tanks, and in the dry season when it becomes old it is boiled to purify it.

The market is held on a level space of ground outside of the wall. This is quite a fashionable promenade in the morning, and is a most animating scene; such a confusion of tongues! to a stranger they all seem to be quarrelling, and just on the point of coming to blows. Such rapidity of utterance—such animated gesticulation—such a perfect bedlam I never before heard or saw in my life. And then the manner of doing things. Here you see a bevy of black women from the country with a little fruit, a few guanas or cocoanuts, the whole stock in trade perhaps not amounting to 3 rials (3 shillings) which they have come five or six miles to sell. There again stands a lusty negro at a little table with a cleaver in his hand, before him a lot of livid looking stuff in strings, that would puzzle any one to guess what it consists of; but that man is the butcher, and that questionable heap before him is the meat that he is vending *by the measure*.—His customer puts down his rial, and the fellow measures off the yard or half yard of meat, throws it into the basket, each abusing the other most volubly, the one for charging so much, and the other for being obliged to sell so cheap. But I have not time to tell you half the singularities or peculiarities I saw.

The most important article of a lady's dress, that which at once decides the *ton* of an individual, is the comb. The fashions in these are watched with the greatest attention. At the least change of form or ornament, every one must be exchanged for the new mode. Even the poorest class will sacrifice almost any thing else for the sake of a comb in the fashion. They wear them very large, with a margin or top extending up and around the head, like one of our fashionable ladies' bonnet fronts; and this is all carved and worked beautifully. Of course they never wear hats, their combs precluding the possibility of that, even if the climate required it.

The eating hours are about ten in the morning, and six in the afternoon—only twice a day. So far I like the living very much—their coffee is excellent. We have fowls, which are very plentiful, eggs, fish, a kind of sausage, beef, pork, (beef is very poor,) kid's meat—this is preferable to mutton or lamb; and then for vegetables we have the plantain, which I like exceedingly; it is generally fried; yams, and many others.—Bread is very dear here, the duties being at present $4 per barrel for flour, to be raised on the first of October to $8, with a city duty of $4 more, making in all, after the 1st October, $12 per barrel, duties. The land here is said to be well adapted to the cultivation of wheat, as they have in the interior all the various temperatures of the different latitudes, from the Torrid to the Frigid zone—but none is raised at present. The government is in hopes that the high duty will encourage the people to commence its cultivation. Among the Yankees this would be done as quick as the season would let them; but here, even with this immense premium before them, it will be a long time ere much will be done. There is nothing that I have yet seen like cultivation any where around Carthagena. Every thing that does grow is spontaneous. Indian corn, of which there is a great deal here, is sowed over the ground without any preparation, before the rainy season, and left to take its chance; the rain washes it in, and they are sure of a crop; nothing more is done till they gather it. Indolence in the very extreme is the order of the day.

For fruits they have bananas, the cocoanut, oranges, water and musk melons, papaya, a kind of melon, guanas, alligator pears, having the appearance of a pear, with a large stone inside, eaten with pepper and salt. There are many kinds more of which as yet I do not know the names. You know I was always very fond of fruit. Well, ever since I have been here, I have been anxious to have a good feast. So yesterday I sent out the negro, and he bought a fine lot of bananas, melons, and other things. Although I was cautioned, I helped myself freely, and the consequence was such that I shall be very careful how I eat fruit here again. They were delicious certainly, but it does not answer for one not used to the climate to eat them; he cannot digest them. I was soon seized with dizziness of the head, and sickness of the stomach; vomiting relieved me; I arose this morning well as ever, but with a firm determination to eat no more fruit.

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There is no society here; at least I have found none, and they tell me there is none. The Spanish ladies are most strictly kept from social intercourse with strangers, for the state of morals is loose in the extreme, and the parents trust more to their own vigilance in preserving their daughters from contamination than to their moral education, which would of course be the only effectual safeguard. But mental or moral cultivation is very limited among both men and women. The young Senoritas of some families are even kept from the society of the other sex, with all the jealous watchfulness peculiar to the old hidalgos of Spain. An amusing instance of this we have next door to us, in the dwelling of a rich old Senior, who has three or four very handsome daughters, who are kept most strictly secluded. To one of these a young Columbian is strongly attached, and I believe the attachment is reciprocated; but he cannot muster courage to face the pride of the old man, and pop the question, or indeed he dares not enter the house, but is obliged to resort to an expedient to carry on his courtship, and obtain his interviews. The balconies of the house of the old Spaniard and ours are upon the same level; and though the space of some 10 or 12 feet apart, he has by some means obtained Mr. ****** acquaintance, and every day after business hours he is our never-failing visitor. He takes his station on our balcony and his inamorata on theirs; and there day after day, month after month, and year after year, for this *liason* has been kept up in this way these three years, is the poor swain tantalized, by seeing happiness within his reach, yet not having the courage to stretch forth his arm lest it might escape him for ever—Poor fellow! I don't know whether he will ever succeed, but most certainly his perseverance deserves success.

When I first arrived, I asked if there were any scientific men here, but was told such things were unknown.

The city of Carthagena contains about ten or twelve thousand inhabitants: mostly or by far the greater part are blacks, who have several times attempted a rising, but the conspiracies were discovered in time to prevent them. For this reason a garrison of 500 men is constantly kept in the city. There are a few slaves, though the greater part of the blacks are free, and entitled to all the privileges of citizens, some of them being magistrates, and officers in the army. General Lucas, the former governor of Carthagena, is said to be a black man, or at least a mulatto. The old Spaniards kept up constantly a garrison of 15000 men. The barracks and buildings for their accommodation are still standing. There was an Inquisition here, which was abolished at the revolution. It is said that all the instruments of torture &c. are still preserved in the old church of St. Domingo. A gentleman has promised to go with me to see them. If we go before the Medina sails, I will send you an account of them; if not, the next time. Their soldiery have been very well disciplined, but the men are all small, scarcely any, I should think, exceeding five feet. They are dressed in white cotton, very coarse, made entirely plain, black leathern belts, and low bell-crowned caps, covered with white muslin: all go barefooted. They are continually parading about the streets, with fife and drum, which at scarcely any time are unheard.

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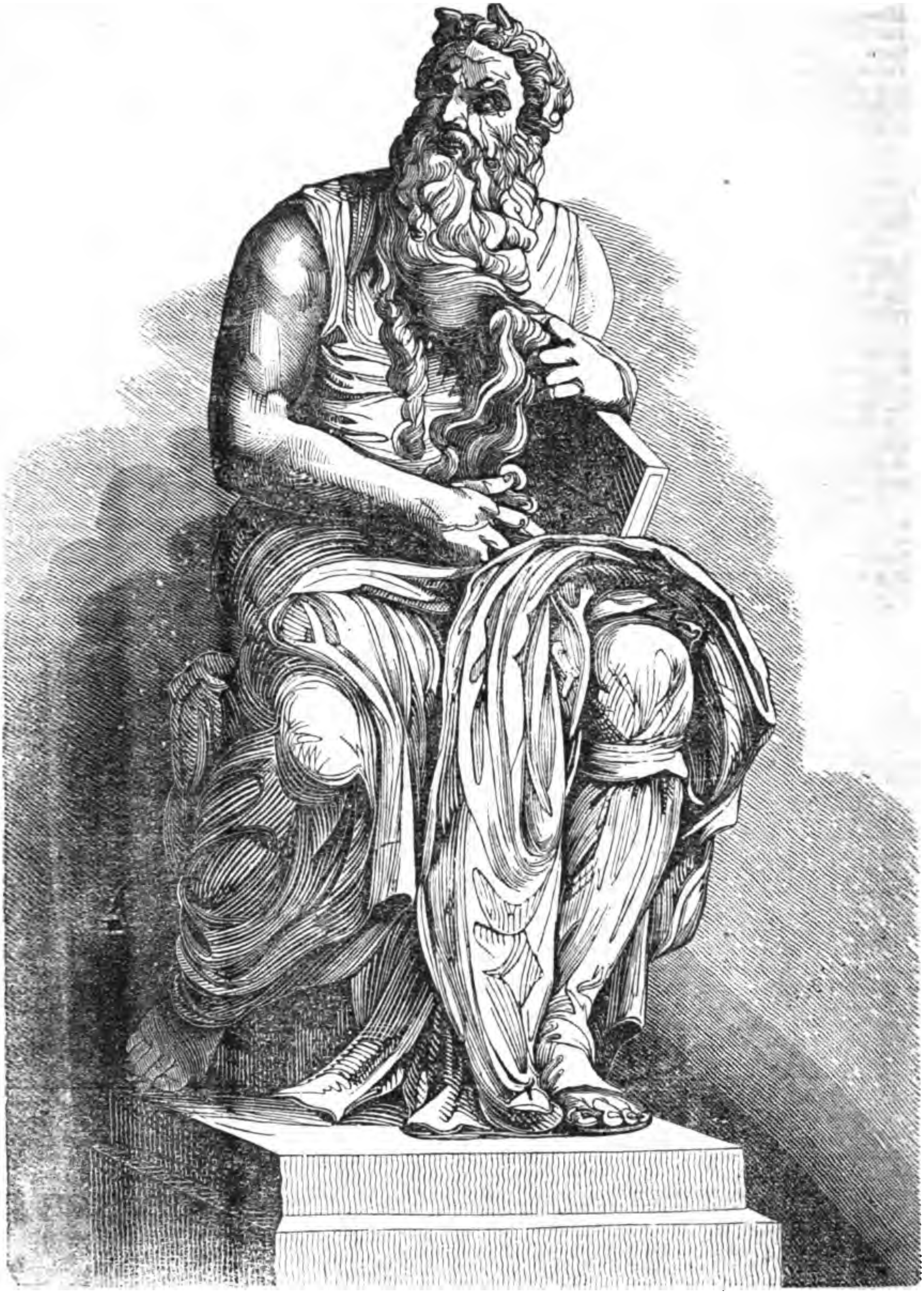
P. S. I cannot obtain any books giving an account of this country in this place, and I neglected to bring any. I wish you would endeavour to procure me some works of the kind.

* * * * * *

There is an interesting problem for the moralist to solve in the state of this country. The question is very natural which asks, why there is so much of misery and degradation, why there is so little of mental cultivation, and so much of ignorance and imbecility and vice, among a people so blessed with a soil that produces every thing spontaneously, and a climate that varies in the whole year only from 86 to 92 degrees, and where one might think so little time and labour is required for the production of every thing necessary for life, that mental and moral improvement might go on with rapid strides. But I can spin on no longer.

A. K.



THE STATUE OF MOSES, BY MICHAEL ANGELO BUONAROTTI.

The statue, of which we give an engraving above, is considered as the master-piece of Michael Angelo, and one of the most beautiful pieces of sculpture in the world. The inspired law-giver of the Jews is represented sitting, and seems severely reproving the people for their idolatry. In his countenance is a dignified sternness of expression, marking a vigorous intellect, and not inconsistent with the character given of him in Scripture: "Moses was very meek, above all the men which were upon the face of the earth." Besides the grandeur of air and attitude of this figure, its anatomical truth has been highly praised and admired

The "twin beams," which, in some pictures of Moses, are represented as rays of light, appear in this and in some other representations of the prophet as horns; a strange error, which no doubt arose from the *Latin* Vulgate translation of that passage in the Pentateuch (Exodus xxxiv. 29,) in which it is said that Moses's face *shone* when he came down from the mount; the Hebrew word, used in the original, which signifies to shine, or to emit rays, as it were horns; and the ancient translator took the expression in the latter, though certainly not intended sense.* Hence it is, that Christian painters have often represented Moses as horned.

Michael Angelo Buonarotti, illustrious as a painter, a sculptor, and an architect, was born in Tuscany in 1474, and descended from a noble family. Invited to the court of Pope Julius the Second, an early and warm admirer of his talents, he received from him an unlimited condition to build a mausoleum. As soon as his design was completed, he was desired to go into St. Peter's at Rome, to see where it could be conveniently placed; but the church being old, and ill-adapted for so superb a mausoleum, the Pope determined to *rebuild St. Peter's;* and this is the origin of that magnificent structure which took a hundred and fifty years to complete, and which now affords a grand display of architectural splendour!

After the death of Julius the Second, Michael Angelo, in pursuance of an order, began to construct a monument to his memory; but he was frequently interrupted in his task by his great patrons, the successive Popes, whose regard for the artist was mixed with a caprice and jealousy which were often extremely vexatious. At last, after much negotiation, and after changing his design three times, he was permitted to finish his work, and to have it placed, not in the great and famous church of St. Peter's, as originally intended, but in the ancient and curious Church of *S. Pietro in Vincoli*. This monument of Julius the Second is indifferent in itself, but it is ennobled by the figure of MOSES, which, had it not been for Michael Angelo's other masterly productions in painting, sculpture, and architecture, would have been sufficient to stamp his fame as an extraordinary genius.

In the discourse which the late Mr. West delivered from the Chair of the Royal Academy, in 1811, are the following remarks on this statue.

"Now let us see what works there are, since the revival of art in the modern world, which rest on the same basis of appropriate character, and correctness of outline, with those of the ancient Greeks. The MOSES, which the powers of Michael Angelo's mind has presented to our view, claims our first attention. In this statue the points of character, in every mode of precise, determinate, and elevated expression, have been carried to a pitch of grandeur which modern art has not since excelled. In this figure of MOSES, Michael Angelo has fixed the unalterable standard of the Jewish lawgiver, a character delineated and justified by the text in inspired Scripture. The character of Moses was well suited to the grandeur of the artist's conceptions, and to the dreadful energy of his feelings. Accordingly, in mental character, this figure holds the first station in modern art, and, I believe we may venture to say, had no competitor in ancient, except those of the Jupiter and Minerva by Phidias."

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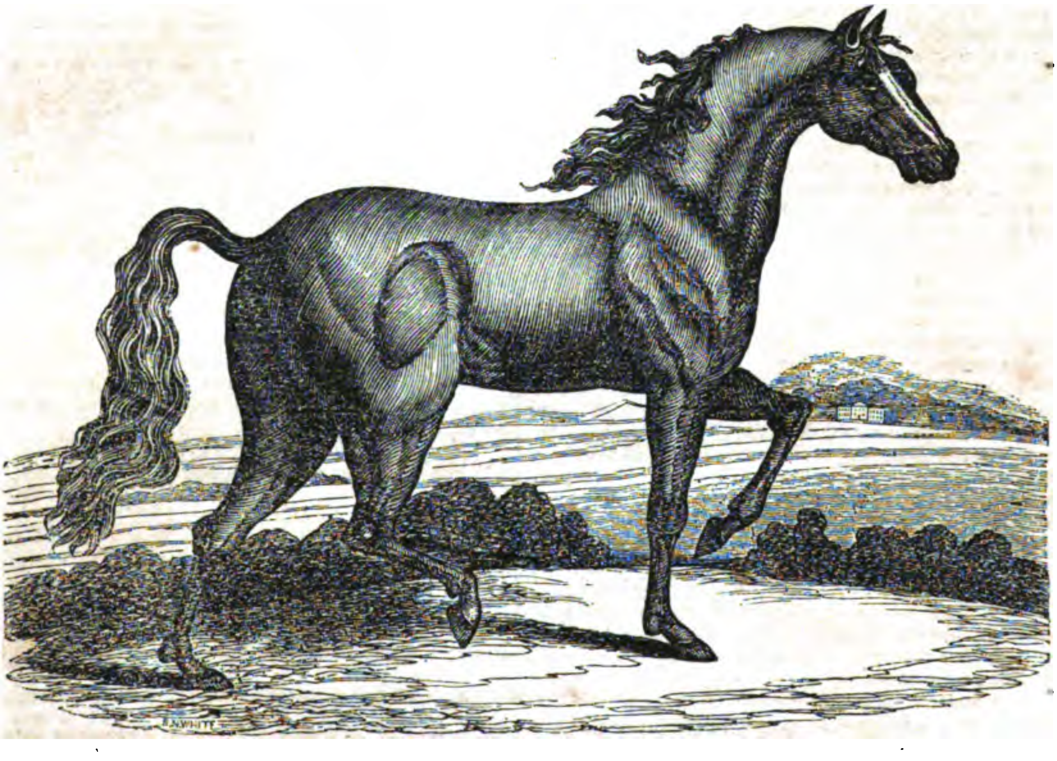
* The Latin Vulgate translation is, *Quod cornuta esset facies sua.*

NATURAL HISTORY.



THE HORSE.

"The noblest conquest which was ever made by man is that of this spirited and haughty animal, which shares with him the fatigues of war and the glory of the combat. He feels pleasure also in the chase, in tournaments, in the course; he is all fire, but, equally tractable as courageous, does not give way to his impetuosity, and knows how to check his inclinations; he not only submits to the arm which guides him, but even seems to consult the desires of his rider; and, always obedient to the impressions which he receives from him, presses on, moves gently, or stops, and only acts as his rider pleases. The Horse is a creature which renounces his being, to exist only by the will of another, which he knows how to anticipate, and even express, and execute by the promptitude and exactness of his movements: he feels as much as we desire, does only what we wish, giving himself up without reserve, and refuses nothing, makes all use of his strength, exerts himself beyond it, and even dies, the better to obey us.

"Such is the Horse, whose natural qualities art has improved. His education commences with the loss of his liberty, and by constraint it is finished. The slavery or servitude of these creatures is universal, and so ancient that we rarely see them in their natural state: they are never wholly free from all their bands, not even at the time of rest; and if they are sometimes suffered to range at liberty in the fields, they always bear about them tokens of servitude, and frequently the cruel marks of servitude and of pain: the mouth is deformed by the wrinkles occasioned by the bit, the flanks scarred with wounds inflicted by the spur, the hoofs are pierced by nails, the attitude of the body constrained, from the subsisting impression of habitual shackles, from which they would be delivered in vain, as they would not be the more at liberty for it. Even those whose slavery is the most gentle, who are only fed and broken for luxury and magnificence, and whose golden chains serve less to decorate them, than to satisfy the vanity of their master, are still more dishonoured by the elegance of their trappings, by the tresses of their manes, by the gold and silk with which they are covered, than by the iron shoes on their feet.

"Nature is more delightful than art; and, in an animated being, the freedom of its movements makes nature beautiful: observe the Horses in Spanish America, which live wild; their gait, their running, or their leaping, seem neither constrained nor regular. Proud of their independence, they fly the presence of man, and disdain his care; they seek and find for themselves proper nourishment; they wander about in liberty in immense meads, where they feed on the fresh productions of an eternal spring: destitute of any fixed habitation, without any other shelter than a mild sky, they breathe a purer air than those which are confined in vaulted palaces. "Wild Horses," says a recent writer, "are smaller, weaker, and more timid, than domesticated Horses; their heads are clumsy, large, ignoble, with great ears, which prove their near relationship to the rustic ass; their hair, too, is long, harsh, or frizzled."

"The natural disposition of these animals is not ferocious, they are only high spirited and wild; and though superior in strength to the greatest part of animals, they yet never attack them; and if they are attacked by others, either disdain them or trample them under their feet. They go also in bodies, and unite themselves into troops, merely for the pleasure of being together, for they are not fearful of, but have an attachment to each other. As herbs and vegetables are sufficient for their nourishment, they have quite enough to satisfy their appetite; and as they have no relish for the flesh of animals, they never make war with them nor with each other; they never quarrel about their food, they have no occasion to ravish the prey of another, the ordinary source of contentions and quarrels among carnivorous animals. They live in peace because their appetite is simple and moderate; and as they have enough, there is no room for envy.

(To be concluded in our next.)

MYTHOLOGY.

THE CYCLOPS.

"The Cyclops were the workmen of Vulcan; they were probably very strong men, employed in the most laborious services of society. In Peloponnesus, some of the first edifices were constructed of vast stones, which still remain. The arrangement of these stones, before the machines existed which have since been invented to assist labour, must have required immensely strong men. This is therefore called, from the Cyclops the Cyclopean architecture.

"Vulcan had many Cyclops: the chief were Brontes, Steropes, and Pyracmon. The Cyclops were of prodigious stature, and had each but one eye placed in the middle of their foreheads. They lived on such fruits as the earth spontaneously affords, and had no laws. All this only describes rude men, living by hard labour in a state of poverty.

"The fiction of the Cyclops being one-eyed arose from the fact that when they were exposed to the most violent action of the fire with which they wrought, they were forced to shield their faces with a piece of stiff leather, that had in the middle of it a single perforation through which they looked.

Virgil thus describes the Cyclops at their work.

Amid the Hesperian and Sicilian flood,
All black with smoke, a rocky island stood,
The dark Vulcanian land, the regions of the god.
Here the grim Cyclops ply, in vaults profound,
The huge Æolian forge that thunders round.
Th' eternal anvils ring, the dungeon o'er;
From side to side the fiery caverns roar.
Loud groans the mass beneath their ponderous blows,
Fierce burns the flame, and the full furnace glows.

* * * * * *

Th' alternate blows the brawny brethren deal;
Thick burst the sparkles from the tortured steel.
Huge strokes rough Steropes and Brontes gave,
And strong Pyracmon shook the gloomy cave.
Before their sovereign came, the Cyclops strove
With eager speed to forge a bolt for Jove,
Such as by heaven's almighty lord are hurl'd,
All charged with vengeance on a guilty world.
Beneath their hands, tremendous to survey!
Half rough, half form'd, the dreadful engine lay
Three points of rain, three forks of hail conspire,
Three arm'd with wind; and three were barb'd with fire.
The mass they temper'd thick with livid rays,
Fear, Wrath, and Terror, and the lightning's blaze.

PANDORA.

"The name of Pandora signifies *all gifts.* Pandora was originally a beautiful female image, formed by the skill of Vulcan, and carried to heaven. There Jupiter endowed her with life, Venus gave her beauty, Pallas wisdom, and Juno riches; Mercury taught her eloquence, and Apollo music.

"With these accomplishments Pandora was a perfect woman, and she was sent by Jupiter in a box to Prometheus. Jupiter, it is said, was angry at Prometheus for the manifold blessings which the latter had bestowed on mankind, because Jupiter himself chose to be regarded as the supreme benefactor of the human race.

"To revenge himself upon Prometheus, Jupiter sent him the gifted Pandora for a bride. She was enclosed in a box with disease, war, pestilence, famine, discord, envy, calumny, and all the evils which Prometheus had endeavoured to banish from the earth. Prometheus, dreading some concealed evil, refused the present of Jupiter; but Epimetheus, the brother of Prometheus, felt greater curiosity, and opened the box. The beautiful Pandora instantly appeared, and with her came forth all the train of calamities which were concealed in the box.

"Epimetheus perceiving the dangerous contents of the box, immediately closed it, but alas! it was too late. All the evils had escaped, and nothing remained in it but Hope, which, according to Jupiter's decree, should, in due time, afford the unhappy mortals some consolation."

FORTUNE.

"Why was fortune made a goddess, says St. Augustin, since she comes to the good and bad without any judgment? She is so blind, that without distinction she runs to any body; and many times she passes by those that admire her, and sticks to those that despise her. So that Juvenal had reason to speak in the manner he does of her.

> Fortune is never worshipped by the wise;
> But she, by fools set up, usurps the skies.

"Yet the temples that have been consecrated to her, and the names that she has had, are innumerable: the chief of them are the following.

"She was styled Aurea, or Regia Fortuna, and an image of her so called was usually kept in the emperor's chamber; and when one died, it was removed to the palace of his successor.

"She is also called Cæca, 'blind.' Neither is she only, says Cicero, blind herself, but she many times makes those blind that enjoy her.

"She was called Muliebris, because the mother and the wife of Coriolanus saved the city of Rome. And when his image was consecrated in their presence, it spoke these words twice: 'Ladies, you have dedicated to me as you should do.'

"Servius Tullus dedicated a temple to Fortuna Obsequens, because she obeys the wishes of men. The same prince worshipped her, and built her chapels; where she was called Primigenia, because both the city and the empire received their origin from her; also Privata or Propria, because she had a chapel in the court, which that prince used so familiarly, that she was thought to go down through a little window into his house.

"Lastly, she was called Viscata, or Viscosa, because we are caught by her, as birds are with birdlime; in which sense Seneca says, "kindnesses are birdlime."

THE TITHE SYSTEM IN IRELAND.

The Waterford Chronicle contains a case furnished by a correspondent, who offers his name to any one desirous of getting it. The case is this. "Catharine Carrol is a poor woman living at Sallytruckle, on the Kil Saint Laurence road, in a wretched cabin, and until this year she was never called upon to pay incumbent money. The hand of affliction was heavy upon this poor creature; her son lay in bed sick—it proved his death bed—if bed it may be called, the wretched wad of straw upon which he lay. A daughter, too, was lying down ill of a severe cold, with lumps in her throat. The collector called to demand the tax. The wretched woman had not the means of paying it.—What was to be done? The whole house did not contain sufficient distraint; but—let me restrain my indignation while I tell it—the poor woman had just taken advantage of her children's illness, of their confinement to their bed, to take off the only shirt and shift they possessed, to wash them, and she had them unfortunately upon a bush at the door drying at that moment. The eye of an ecclesiastical tax-gatherer is comprehensive—it takes in every thing. He saw the prize, and at one fell swoop carried off the shirt of the boy! the shift of the girl!! the trowsers of the poor man!!! his stockings!!!! a waistcoat belonging to another child!!!!! and an apron belonging to another daughter!!!!!! All, all, all, sir, went to make nectar of the wine of a pampered ecclesiastic. But I have not done. The boy died yesterday, and, on the bed of death, although this worse than Turkish act occurred on Friday week, this unhappy child knew not the comfort of a shirt, owing to the ruthless system of the church establishment. His little corpse is now lying naked. The poverty of the parents is excessive." Read that—and let any man say it is to be wondered at that Ireland should be agitated to its very centre, by the workings of the Law Church—and what man after reading it will say that the church ought not to be placed on its own bottom? Why should Catholics and Dissenters be coerced to support it?

A WILD MAN.

For more than two years past, the females of Wallingford, (England,) have been kept in perpetual alarm and excitement by the frequent appearance of a wild man, who haunted the fields and meadows in the vicinity of the borough. Dark and dreadful were the tales of the timid respecting the nature of this mysterious visitant; at one time he was represented as a baboon or ourang outang, covered with hair; at another the superstitious held him forth as a troubled spirit that only required some authorized clerk for its exorcism. Although he had been seen by a host of females whose veracity was unimpeachable, he had the adroitness on all occasions (except the fatal one) to brush at the approach of man. About a fortnight or three weeks ago, as two girls were working in a field near Benson, little dreaming of supernatural agencies, suddenly the wild man stood before them. He did not perceive the approach of three strapping fellows who happened at that instant to be passing near the spot. Upon one of the women, however, appealing to them, he instantly caught the alarm and scampered off, the men of course following, and such a chase has not been seen for many a day. The wild man bounded along, cutting the air like an eagle, as though his ears had been seethed in bear's grease, the pursuers following like a leash of beagles.

At length, however, after a run of two miles, the ghost, if ghost it were, or wild man, or whatever else it might be, fell exhausted to the earth, and on being raised, and the lather removed from his face, he was found to be a barber of some standing in Wallingford! At his earnest request, the honour of being led captive into town with a rope round his neck was dispensed with. The magistrates of Oxfordshire are said to have issued a warrant for his apprehension, but he had previously decamped, and it is rumoured that he has since embarked for America. What renders the whole proceeding most unaccountable is, that he is a married man, with a family.—*Reading (Eng.) Mercury.*

ENCOURAGEMENT TO PERSONS OF MATURE AGE TO CULTIVATE THE MIND.

Instances have occurred of individuals, in whom the power of imagination has at an advanced period of life been found susceptible of culture to a wonderful degree. In such men, what an accession is gained to their most refined pleasures! What enchantments are added to their most ordinary perceptions! The mind awakening, as if from a trance, to a new existence, becomes habituated to most interesting aspects of life and of nature; the intellectual eye is "purged of its film;" and things the most familiar and unnoticed disclose charms invisible before. The same objects which were lately beheld with indifference, occupy now all the powers and capacities of the soul; the contrast between the present and the past serving only to enhance and to endear so unlooked for an acquisition. What Gray has so finely said of the pleasures of viscissitude, conveys but a faint image of what is experienced by the man who, after having lost in vulgar occupations and vulgar amusements his earliest and most precious years, is thus introduced at last to a new heaven and a new earth:

During the late struggle of the Greeks to regain their liberty, a body of Turks were, in 1824, encamped in a part of Greece, and committed every kind of excess upon the inhabitants. One of these barbarians, an officer, had pursued a Greek girl, who took refuge in the house of a widow. The widow met him at the door, and mildly attempted to dissuade him from forcing his way in to seize the girl. Enraged he drew his sabre; but when in the act of attempting to cut down the widow, it snapped in two pieces before it reached the victim. The wretch paused, but drew a pistol, to accomplish his purpose in that manner; but it missed fire: and when in the act of of drawing a second, he was forcibly dragged away by one of his companions, who exclaimed, "Let her alone. Do not you see that her time is not yet come?" Resolved, however, on taking some revenge, he carried off her infant child to the camp: but, as though Providence designed to complete its work on this occasion, whilst the officer was asleep the child was carried back to the widow by one of his own men.

This anecdote is verified by the Rev. Mr. Arundel, author of "A visit to the Seven Churches of Asia," who was in the village at the time.

ITEMS OF INTELLIGENCE.

In Cochin-China, when a person is supposed to be dying, his friends and relations seize his arms, and assemble around his bed: they flourish their sabres, striking and cutting at the air, and they think that by this means they prevent the approach of the evil demons.

The French Government has built a steam frigate at Toulon of 160 horse power, and given to it the honoured name of our late fellow citizen, Fulton.

The Royal Court of Paris has recently decided that no Frenchman can institute proceedings in the French Courts of Law, against any foreigner whom he may have previously sued in the courts of another country.

I have never yet seen a man drunk in France, even among the lowest of the people.—*Thos. Jefferson.*

In a recent discussion at Rouen, relative to the sale of public property, the *women* entered the hall, and put an end to the same by extinguishing the candles. This certainly was a Gothic, though harmless mode of resisting the public authorities.

The celebrated traveller, Capt. James Ross, had passed through Copenhagen on his way to Sweden, on matters relative to his northern expedition; on his return he was to undertake a voyage to the South Pole.

The Globe of London says, the great battle of European principles has been fought in Portugal. It was the struggle between arbitrary government and constitutional institutions, and the last have obtained a signal victory. Don Miguel was the type of despotic government on the continent. It is for this the *tories* have admired him so much. Happily for civilization he has fallen, and it is to the administration of Lord Grey we are indebted for this triumph.

The salary of the Lord Chief Justice of England is $44,444. The salary of the Chief Justice of the United States is $5,000.

It is stated that there is a Sabbath School at Manchester, England, which contains 2,500 pupils. We presume there is no other of equal size in the world.

Mr. Buckingham stated in the British parliament, that he had taken the pains to place himself, during a whole day, in a tavern in London, and that he saw enter there for liquor, 2800 men, 1855 women, and 289 children! The proprietor of the establishment assured him that he sold liquor weekly to 269,450 men, 103,500 women, and 142,450 children!

The African slave trade is very extensively carried on from Cuba. The convention and laws for its suppression seem to be all dead letters. Twenty-four slave vessels were recently lying at Havana, at one time. Some of them bring 500 victims—"packed like pickled herring," and the market for them is brisk.

The Charleston, (S. C.) Roman Catholic Miscellany of June 5th contains the following paragraph:—"There will be an Office and High-mass in the Cathedral on Monday, 30th inst. for the repose of the soul of La Fayette. The Office to commence at 8 o'clock."

A bill is on foot, and will in due time come before Congress, authorizing the Secretary to take steps for the further suppression of intemperance in the Navy. In the investigations in which the bill originated, it appeared that Commodore Rogers never to his knowledge tasted ardent spirits—Commodore Chauncey has not in the last thirty years—Commodore Morris not for many years, and the Secretary of War has never tasted it. Young men, who aspire to situations of honour, remember these examples.

The Charleston (S. C.) Sun says:—"A young black child, that had lost its mother when two months old, has since that period, nearly two years, lived principally on the suck received from a bull slut. He speaks plain, and whenever he wishes suck, he drives away the slut's pups and takes it. Wherever the slut goes the boy follows her, and *vice versa.* They are both owned by a gentleman on the Neck.

POETRY.

THE LIGHT OF HOME.—Mrs. Hale.

My boy, thou wilt dream that the world is fair,
And thy spirit will sigh to roam;
And thou must go; but never, when there,
Forget the light of home.

Though pleasure may smile with a ray more bright,
It dazzles to lead astray:
Like the meteor's flash, 'twill deepen the night,
When thou treadest the lonely way.

But the hearth of home has a constant flame,
And pure as vestal fire:
'Twill burn, 'twill burn, for ever the same,
For nature feeds the pyre.

The sea of ambition is tempest tost,
And thy hopes may vanish like foam;
But when sails are shivered and rudder lost,
Then look to the light of home;—

And there, like a star through the midnight cloud,
Thou shalt see the beacon bright;
For never, till shining on thy shroud,
Can be quenched its holy light.

The sun of fame, 'twill gild the name;
But the heart ne'er felt its ray;
And fashion's smiles, that rich ones claim,
Are but beams of a wintry day.

And how cold and dim those beams must be,
Should life's wretched wanderer come!
But, my boy, when the world is dark to thee,
Then turn to the light of home.

SECTION XXI.

HISTORY.

EGYPT.

The account of the Shepherds, who were expelled from Egypt by Thummosis, retreating to Judea and building Jerusalem, is either fabulous, or else refers to the original inhabitants of Palestine before the days of Moses; because they are represented by Josephus as returning to aid in the subjection of Egypt under Osarsiph, the Moses of Scripture.

After the Egyptians had expelled these invaders, they were governed by their native kings, namely Chebron, Amenophis, Amesses, Mephres, Mephramethosis, Orus, Accenchres; and after them arose Buesiris, who built Thebes or Heliopolis, a city of immense wealth and grandeur, having one hundred gates, the very ruins of which have been the wonder of later ages. Osymandus succeeded him, and was able to raise an army of 400,000 foot, and 20,000 cavalry against the Ethiopians. He greatly adorned Memphis with elegant porticos and temples. He also built a library, and placed over the entrance this inscription: "The Medicine of the Soul?"

When several monarchs had succeeded him, came the celebrated and cruel Nitocris, the first female who wore the crown of Egypt. She succeeded her brother 1678 B. C. Historians generally place Mœris or Ramesses, who dug the lake and built store cities, as the father of the great Sesostris, and consider him the Pharaoh who ruled when the posterity of Abraham went out of Egypt. Dr. Russel in his recent history of Egypt has concusively shown, that Sesostris was the son of Mœris, and that his era is thirteen hundred years before Christ.

The Pyramids of Egypt have long been regarded as one of the wonders of the world, and if we are to follow the opinion of Mr. Wilford and Dr. Russel, the great one was erected by Apachnes, the third Shepherd king, 1800 years before Christ.

The enmity of the Egyptians to the Shepherds was perpetuated for a long period, so that when Joseph's brethren came down to settle among them 250 years after their expulsion, they were allotted to a distant part of the country, the land of Goshen. There they multiplied in about 210 years from twelve families to about three millions of souls.

This astonishing increase greatly excited the fears of the Egyptians, lest they should again be brought under the dominion of another race of shepherds. The Egyptians adored the Ox and the Lamb, while the sons of Jacob ate them both, and thus became obnoxious to their hatred and contempt. To prevent them from aspiring to authority, the Egyptians oppressed the descendants of those to whom they once extended the hospitalities of the nation. Joseph, the saviour of the country in time of the famine, was forgotten, and the servitude of his posterity and people was carried to a brutal pitch.

During the days of the Shepherd kings, Abraham was driven by a famine in Canaan to sojourn for a season in Egypt, and when he came away he was enriched by a present of cattle from the reigning prince. In aftertimes, his grandson Jacob was obliged to send down to this fruitful country for corn for his family; and seventeen hundred years before Christ, Joseph the son of Jacob entered Egypt a slave, and in about 250 years after that, God heard the sighing of his people and raised up Moses and Aaron to be the deliverers of their nation.

Notwithstanding the Egyptians feared and hated the Israelites, yet they were unwilling to allow them liberty to return quietly to their own land.

It was not until ten plagues from heaven successively desolated the land, ending with the destruction of all the first-born in every family, that the proud and stubborn will of Pharaoh, the Ramesses or Mœris of the ancients, consented to their departure.

Then they were hurried away with presents, and urged to be gone. However, they had scarcely gone when the monarch and people returned to their obstinacy, and an army was gathered of horsemen and chariots to pursue and bring them back to slavery and toil. But God had decided otherwise, and accordingly a miraculous passage was opened for them through the red sea, where they all passed in safety. Pharaoh and his host coming up with them, pursued on into the fatal gulf, but before he and his army were landed, the waters returned by the command of Jehovah to their natural channel, and no one escaped "to tell Egypt the story."

NATURAL HISTORY.

THE HORSE—[Continued.]

As all parts of Europe are at present peopled, and almost equally inhabited, wild Horses are no longer found there; and those which we see in America were originally European tame Horses, which have multiplied in the vast deserts of that country. The astonishment and fear which the inhabitants of Mexico and Peru expressed at the sight of Horses and their riders, convinced the Spaniards that this animal was entirely unknown in these countries; they therefore carried thither a great number, as well for service and their particular utility as to propagate the breed. M. de la Salle, in 1685, saw in the northern parts of America, near the bay of St. Louis, whole troops of these wild Horses feeding in the pastures, which were so fierce that no one dared approach them. The author of the History of the Adventures of the Bucaneers, says that, in the island of St. Domingo, Horses may sometimes be seen in troops of upward of five hundred, all running together, and that as soon as they see a man, they will all stop; that one of them will approach to a certain distance, snort, take flight, and then all the rest follow him. To catch them, they make use of nooses made of ropes, which they spread and hang in places which they know they frequent: but if they are caught by the neck they strangle themselves, unless the hunter comes time enough to their assistance, who instantly secures them by the body and legs, and fastens them to trees, where they are left for two days without either food or drink. This experiment is sufficient to begin to make them tractable, and in time they become as much so as if they had never been wild; and even if by chance they ever regain their liberty, they never become so again, but know their masters, and suffer them to catch them again without further trouble.

The manners of these animals almost wholly depend on their education. From time immemorial it has been which we may draw any precedents; and as robust Horses are at their entire growth in less time than delicate ones, they also live less time, and at fifteen years of age are old.

The Arabian Horses are the handsomest known in Europe, they are larger and plumper than those of Barbary, and equally well shaped, but as they are not often brought into this country, riding-masters are not able to give an exact account of their perfections and defects.

The Horses of Barbary are more common; they are frequently negligent in their paces, and must be often reminded: they are very swift and strong, very light, and very fit for hunting. These Horses seem the most proper to breed from; it is only to be wished that they were of larger stature, as they seldom exceed four feet eight inches high.

The Turkish Horses are not so well proportioned as those of Barbary: they will, however, travel a great way, and are long winded: this is not surprising, if we do but consider, that in warm countries, the bones of animals are harder than in cold climates; and it is for this reason, that they have more strength in the legs.

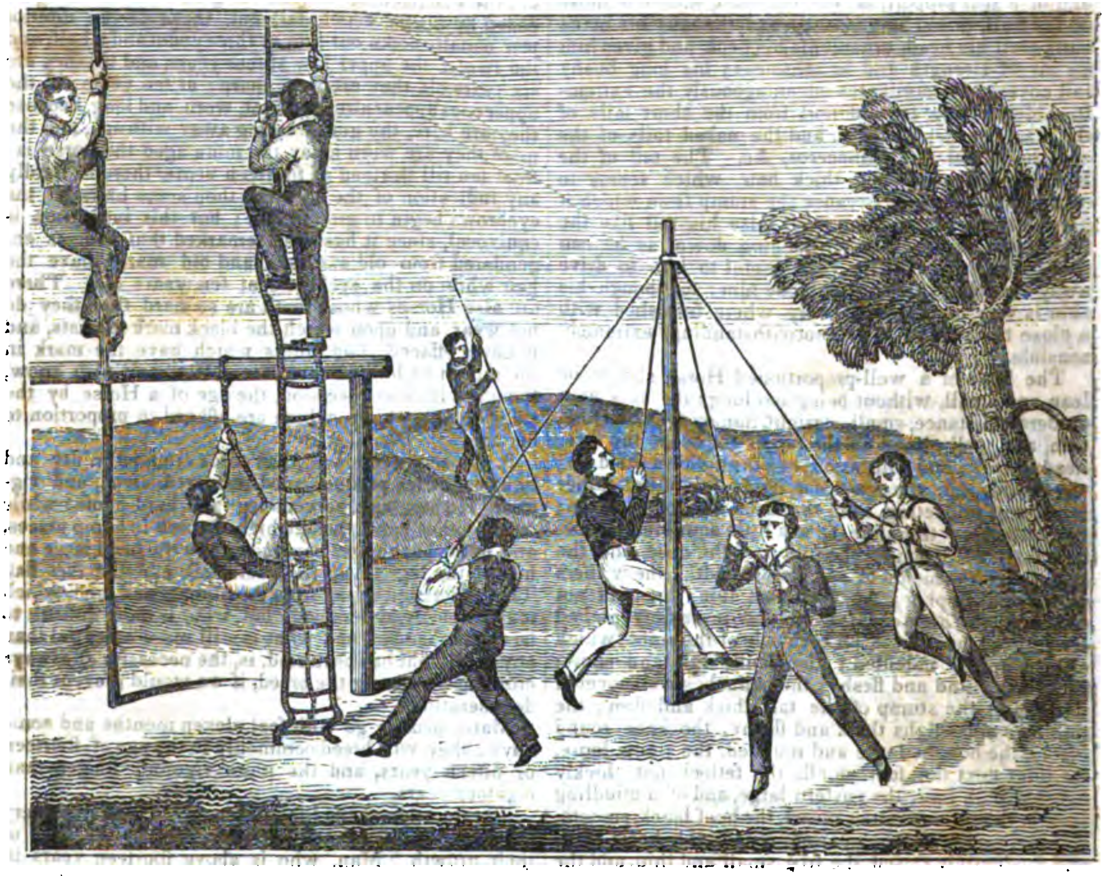
The Spanish Horses hold the second rank after those of Barbary; those of a handsome breed are plump, well coated, and low of stature; they also use much motion in their carriage, and have great suppleness, spirit, and pride; their hair is usually black, or of a bay chestnut colour, though there are some of all colours, and it is but seldom that they have white legs and noses. The Spaniards, who have an aversion to these marks, never breed from Horses that have them, choosing only a star in the forehead.

The handsomest English Horses have in their conformation great resemblance to those of Arabia and Barbary, from which, in fact, they are bred; they are frequently five feet high, and above; they are of all colours, and have all kinds of marks; they are generally strong, vigorous, bold, capable of great fatigue, and excellent for hunting and coursing.

The Horses of Italy were formerly much handsomer than they are at present, because the breed for some time has been neglected, notwithstanding there are still some handsome Neapolitan Horses, especially draught Horses; but, in general, they have the head large, and the chest thick; they are also untractable. These defects, however, are compensated by their noble form, their stateliness, and the beauty of their motions.

The Danish Horses are so handsome in their form, and so beautiful in their coats, that they are preferred to all others for putting into carriages; they are of all colours, and even of some singular ones, as pied; and Horses spotted like tigers are found no where but in Denmark.

[To be continued.]



GYMNASTICS.

The ancient and modern gymnastics are of a very different character; the former were practised at a time when agility and strength were the principal requisites of a warrior, when leaping, hurling the javelin, racing, wrestling, &c. were exercises which alone would fit men for the field, enable them to repel the attacks of their neighbours, or in turn become themselves the aggressors. When the defence of their own property, or the seisure of that of others, was the employment of a principal part of their lives, the gymnastic art would undoubtedly occupy a prominent place in the education of youth. The ancient gymnastics fitted men for the field, and for the fatigues of war—the modern professes only to improve the constitution; to enable men to endure without injury the sedentary occupations incident to a city life.

In the engravings will be seen a representation of the manners and exercises generally practiced in the schools of the present day—running, leaping, vaulting, climbing the ladder, the pole, and the loose rope, swinging on the bar, and leaping with the pole.

RUNNING.

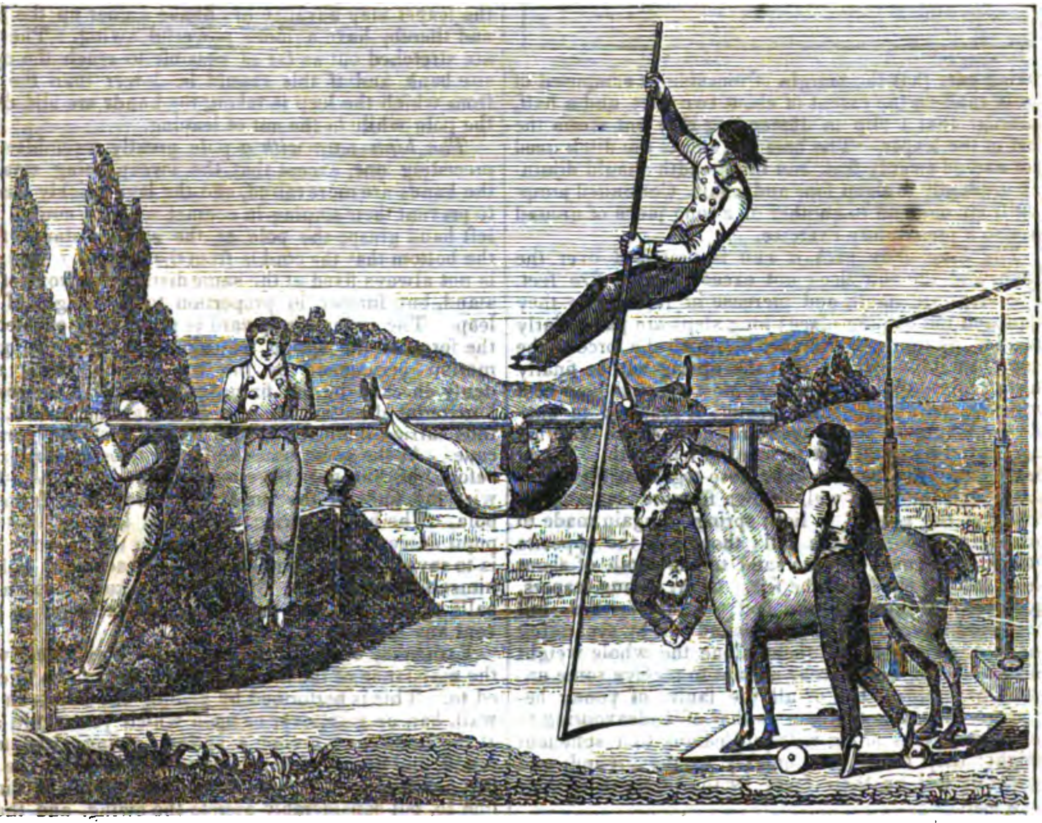
It is evidently necessary to the performance of several of the other exercises, that the young gymnast should particularly endeavour to acquire a swift and easy method of running. The most common fault is the taking of too short and swift steps, which soon fatigue; and the progress is not so great in proportion as when the steps are longer, though less quickly performed.

LEAPING.

Leaping is the best bodily exercise for the lower members, and therefore occupies a very prominent place in all modern gymnastics. In order, however, to practise this with ease, initiatory exercises are often necessary, such as hopping, and striking the lower part of the back with the feet, and the knees against the breast. In hopping, care should be taken to make the steps short and quick, keeping the arms crossed and the head erect. After these exercises have in some degree brought the muscles of the thigh into play, and rendered the knee-joints sufficiently flexible, the pupil commences leaping. Of leaps there are several different kinds, viz. the long leap or without a run, the deep leap, or the same leaps with a pole, all of which are very differently performed.

The high leap without a run. In order to practise the high leap it is necessary to construct a leaping stand, which is generally made in the following manner: Two upright posts are fixed in the ground, at the distance of about twelve feet from each other, having holes drilled in them at every inch, for the insertion of pegs, over which a cord is extended by two weights fastened to its extremities.

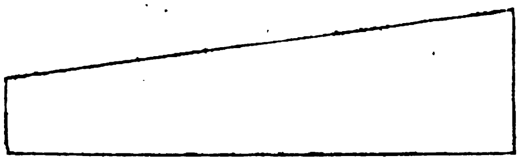
The leap over the cord must always be made from the side of the stand opposite to which the string is laid, in order that it may give way if struck by the feet. This stand therefore allows of leaping from one side only, and even then the weight often occasions the string to entangle the leaper, although his feet carry it off the pegs. A better stand may be made (if the leapers are not very numerous) with poles that shut up in three joints, one within the other similar to some fishing rods, as shown in the engraving. These being drawn to any required length, and supported in their position by means of small pegs, a thin light cane, in place of the string, is laid along the top of the two poles, which are slightly grooved to receive it. This will be found to fly off with the slightest touch, and never to embarrass the pupil. This stand may also be used with equal safety from either side; but the poles cannot be set so far asunder as in the other, it being difficult to procure a thin cane that is straight, above five feet in length. In order to learn the high leap without a run, the pupil is directed to place himself at about the distance of four feet from the stand, and having excited the elastic power of his feet by a preliminary leap of about three feet, he springs over the cane.



The two leaps are made very light, and follow one another instantaneously, that the force of the first spring be not lost. Young pupils begin this with the cane no higher than the knees; but many persons will spring over a cord at the height of the pit of the stomach.

The deep leap is a spring from one side of the ditch to the other, which is considerably lower, or indeed from any high place to a low one and is best performed with the assistance of the hands. By contriving to throw himself partly on his hands, and let the weight of his descent thus gradually pass over to the feet, the gymnast is soon enabled to leap from a height that to an unpractised eye would appear dangerous. By continual practice he is in time enabled to leap with comparative ease from a two pair of stairs window, and thus have a considerable advantage, in case of fire, over the idle or the sedentary man, to whom a leap from the first floor would be often fatal. For exercise, this leap is often performed without the assistance of the hands, and great care must then be taken to fall on the toes, instead of the heels, as otherwise a very considerable shock may be given to the body. *Dropping* also from a height, is often connected with this exercise, and great care must then be taken to keep the knees slack, and the body rather forward in the descent. These exercises must on no account be performed after a meal, as the shock on a full stomach may sometimes occasion hernia.

The long leap without a run is performed merely by the elastic power of the feet, assisted by a swinging of the hands. The long leaps are best performed over a ditch about a foot deep, and increasing in breadth from one end to the other thus:



taking care that the margin of one side be composed of loose sand to the extent of about two feet and a half, in order that a slip in descending may not strain the feet of the leaper. The broadest end of the ditch need not exceed twenty feet, and the breadth should diminish gradually to about four and a half. Continued jumping from one end to another of a long piece of ground is also a preparatory exercise.

The long leap with a run is practised over the ditch, and the run does not exceed twenty-five feet. The steps are small, and increase in rapidity as they approach the leaping-place; long steps are particularly avoided, as they considerably diminish the force of the run. As it is evident that the spring can be finally made with only one foot, and most persons leap best with the right, some little practice is required to enable the leaper so far to measure the distance with his eye, as to bring that foot forward to leap with. When descending, the feet are kept close together, the knees slack, and the chest well thrown forward; and on arriving at the ground, a light spring is again made to lesson the shock of the fall; though if the opposite margin be formed of loose sand to the depth of about three feet, no shock can be felt. Many young leapers, however, by throwing the feet too far forward, fall backward on coming to the ground; or by separating the legs, give to one of them alone the whole weight of the descent, and thereby are apt to receive some unpleasant strains. But of all the faults of young beginners, the most common is that of endeavouring to hurl themselves along without leaping to a sufficient height: they thus come quickly to the ground, and generally fall on their faces by the strength of their own leap.

The high leap with a run is performed either by bending the legs as close under the body as possible, immediately on leaving the ground; or by throwing the left leg over the cane, and drawing the right sharply up to the bottom of the back; or by throwing them together, either to the right or left side, to prevent their catching against the obstacle over which you leap. The run, &c. is the same as in the preceding exercise; and many leapers will in this manner clear a wall considerably above their own height. At Greenwich, this exercise is combined with the game of carrying off a ring on the top of a sword while in the act of leaping and this accustoms the pupils to spring with great precision and coolness.

The long leap with a pole.—We are now come to leaping with a pole, which has been said to be "vaulting," in which the leaper, instead of supporting himself by an intervening object, carries with him a pole, which he places in whatever spot he chooses." This is, however, by no means correct; the support given by a wall, bar or other fixed object over which you have to move, and on which the hands must be moved, bears but little resemblance to a moveable pole, which swings with your body, and on which you in a manner hang. The pole is from about six feet to ten, or even thirteen feet long, and about two inches thick at the bottom, tapering to about an inch at the top: ash is the best wood. This pole is held with the right hand about the height of the head, and the left a little higher than the hips. The run is the same as before, but the leap is made with the left foot. The leaper then swings round to the right of the pole, making a turn, so that his body faces, on his reaching the opposite bank of the ditch, the side from which he set out. The body is kept near the pole, and the swing is carefully given, lest, by pulling the pole in the direction lateral to the ditch, you fall sideways into the ditch. The spring and the fixing of the pole are made at the same moment, as otherwise the swing is not so strongly made; and, in proportion as he becomes more expert, the leaper may advance his hands higher up the pole, and thereby have a more powerful swing. The feet are stretched out as far as possible to reach the opposite bank, and if this should be lower than the one from which the leap is taken, the hands are slid down the pole while in the act of leaping.

The high leap with a pole greatly resembles the preceding one, except that the sweep being smaller, the hands are more raised, and the legs quickly turned, to prevent their coming in contact with the cord. The left hand grasps the pole at the same distance from the bottom that the cord is from the ground. The pole is not always fixed at the same distance in front of the stand, but further in proportion to the height of the leap. The swinging upward is principally effected by the force of the spring as connected with the quick motion occasioned by the run, which, being suddenly checked by the fixing of the pole, changes its horizontal direction to one of a slanting ascent, and thus carries the body of the leaper over the cord or cane. At the same time the leaper fixes the pole right before him, and not either to the right or left, as otherwise the force of the run would throw him from the pole. The best criterion of a good leap is, that the pupil descend in an equal balance to the ground; that is to say, he is not compelled to run backward to keep himself from falling. The descent takes place on the balls of the toes, and the knees are slackened to prevent any shock.

VAULTING, or the art of leaping over an object with the assistance of the hands, requires next to be attended to. This is performed by placing the hands on the wall, bar, or gate, over or upon which you vault, and at the same time giving a spring; swinging yourself round, and descending with your face towards the object. The leaning of the hands not only gives direction to, but considerably assists the swing, and thereby augments the muscular power of the arms, shoulders, &c. as well as of the legs. In order that this exercise may be practised with ease and safety, wooden horses, whose sides and backs are commonly stuffed with wool, and covered with leather, are erected in the gymnasium. 1. The pupil places himself in front of the horse, makes one preparatory leap, and then fixing both hands on it, and springing up, throws his right leg over: the body is then suspended by the support of the hands, and descends gradually to the riding position. In order to dismount, the rider swings himself on his hands, first forward and then backward, and then, closing his feet, throws them both over to the ground. A person may soon learn to mount a horse of any size in this manner.

Vaulting over the horse is frequently practised, as it is applicable in so many instances. With a short run a person soon learns to throw himself over the height of his chest, and, by shifting the hands, over a broad table. Vaulting on, in a standing position, is performed with a short run; the pupil then places his hands at a little distance from one another on the object, and, at the same time, leaping up, draws his knees forcibly towards his breast, so that the feet come up between the hands; the gymnast then, quitting the horse with his hands, stands upright. If he wish to seat himself sideways on the horse, he only, instead of standing, continues to throw forward his feet, and is able to seat himself on the saddle; or should he still continue his leap, he will go over the horse straightforward.

Swinging on the Bar.—This though an exercise not so directly applicable to the accidents of active life as leaping, vaulting, or climbing, greatly augments the muscular power of the body. Bars are erected similar to those shown in the engraving. The exercises on these bars are so various that we cannot be expected to describe them in detail. On the double bars the principal ones are performed, either by raising the body on the two hands as the pupil is represented doing, or by swinging along them, or lowering and raising himself by degrees, by the strength of his arms only. On the single bar the most difficult is the seizing the bar with both hands on the same side, and raising the body by pulling upward, the feet being meanwhile closed and hanging down. This exercise is very fatiguing, and, though many persons will go through it nine or ten times successively, twenty times will tire the strongest man. Hanging by the arms and legs, or by the arms or legs alone, and swinging in different ways round the bar, are the other exercises on this bar. They greatly facilitate the gymnast's progress in the following exercise.

Climbing.—The uses and advantages of this art are too evident to need any particularization. In order to practise it in all its varieties, different kinds of stands or scaffolds have been recommended. An upright pole and a common rung ladder are attached to a stand formed of two strong posts, as in the engraving. The first thing that pupils attend to in climbing is, to be able to ascend and descend the ladder quickly, without fear, carrying up with them some burden. When they can easily do this, they begin to ascend and descend the inside of the ladder; this also being accomplished, they endeavour to descend it with their hands only. The last exercise on the ladder is, to ascend it with the hands, the feet meanwhile hanging loose; this indeed requires considerable exertion, for the whole weight of the body must not only be supported but raised by one arm only, while the other catches at the second step above the head. Climbing the rope ladder is much more difficult than is generally supposed; for, the bottom of the rope ladder hanging loose, a person unaccustomed to it receives no support from his feet, but rather trouble, as they fly from under him, and give his arms very strong jerks. By degrees, however, he learns to keep his feet stretched out, and thus to avail himself of their assistance. The gymnast now begins to climb the upright pole; this is done by alternately holding on and raising the arms and legs, and requires nothing but a tight hold by the legs and a strong pull with the arms. The other methods of climbing the ropes, &c. are better learned by practice and actual inspection than by any instructions, however detailed.

Germany was the first country that attempted the revival of these ancient sports. In Denmark also, the government, intent on a plan of education. issued an order that a piece of ground should be allotted to every public school for the practice of these exercises; and in 1803, no less than sixteen of these establishments were formed in that kingdom. In 1810, a gymnasium was erected at Berlin by the Prussian government, and placed under the direction of M. Jahn, by whose exertions similar institutions have been formed in various parts of Prussia and Germany. In fact no large academy is considered perfect in those countries which does not include a course of gymnastics in its system. Early in the spring of 1826, a meeting was held in London at the Mechanics' Theatre, Southampton Buildings, Dr. Gilchrist in the chair, to consider the practicability of establishing a London Gymnastic Society. Professor Vosiker of Germany came forward and offered to give his instructions gratuitously, and another gentleman present advanced the money for the erection of the apparatus. A society was soon formed, and they purchased a piece of ground on the higher part of Spa Fields, near Pentonville. From its elevation it is dry, and capacious enough to accommodate about three hundred gymnasts. These are arranged in classes according to their size and capacity; and the various poles, &c. are constructed of different sizes accordingly. At the ringing of a bell each class changes the exercises in which it has been previously engaged, and begins a new one, according to a plan prescribed by the director. The success of the undertaking has exceeded even the expectation of the most sanguine of the projectors.

In Dublin there are at present two public gymnasiums, the one in Grafton-street, and the other in Brunswick-street, where young persons of both sexes practise at different hours, having exercises suited to their age, habits of body, &c. They are, however, on a very limited scale.—*Dublin Penny Journal.*

ESCAPE OF PETER THE GREAT.

Like all malecontents, the Strelitz believed that discontent was universal. It was this belief which, in Moscow itself, and a few days before the departure of their sovereign, emboldened Tsilker and Sukanim, two of their leaders, to plot a nocturnal conflagration. They knew that Peter would be the first to hasten to it; and, in the midst of the tumult and confusion common to such accidents, they meant to murder him without mercy, and then to massacre all the foreigners who had been set over them as masters.

Such was the infamous scheme. The hour which they had fixed for its accomplishment was at hand. They had accomplices but no impeachers; and, when assembled at a banquet, they all sought in intoxicating liquors the courage which was required for so dreadful an execution.

But like all other intoxications, this produced various effects, according to difference of constitution in those by whom it was felt. Two of these villains lost in it their boldness; they infected each other, not with just remorse, but with a dastardly fear; and, escaping from one crime by another, they left the company under a specious pretext, promising to their accomplices to return in time, and hurried to the Czar to disclose the plot.

At midnight the blow was to have been struck; and Peter gave orders that, exactly at eleven, the abode of the conspirators should be closely surrounded. Shortly after, thinking that the hour was come, he went singly to the haunt of these ruffians; he entered boldly, certain that he should find nothing but trembling criminals, already fettered by his guards. But his impatience had anticipated the time, and he found himself, single and unarmed, in the midst of their unshackled, daring, well-armed band, at the instant when they were vociferating the last words of an oath that they would achieve his destruction.

At his unexpected appearance, however, they all rose in confusion. Peter on his side, comprehending the full extent of his danger, exasperated at the supposed disobedience of his guards, and furious at having thrown himself into peril, suppressed, nevertheless, the violence of his emotions. Having gone too far to recede, he did not lose his presence of mind; he unhesitatingly advanced among this throng of traitors, greeted them familiarly, and in a calm and natural tone said, that, "as he was passing by their house, he saw a light in it; that supposing they were amusing themselves, he had entered in order to share their pleasures." He then seated himself and drank to his assassins, who, standing up around him, could not avoid putting the glass about, and drinking his health.

But soon they began to consult each other by their looks, to make numerous signs, and to grow more daring: one of them even leaned over to Sukanim, and said in a low voice, "Brother, it is time!" The latter for reasons unknown hesitated, and had scarcely replied, "Not yet," when Peter, who heard him, and who also heard at last the footsteps of his guards, started from his seat, knocked him down by a blow in the face, and exclaimed, "if it is not time for you, scoundrel, it is time for me!" This blow, and the sight of the guards, threw the assassins into consternation; they fell on their knees, and implored forgiveness. "Chain them!" replied the terrible Czar. Then turning to the officer of the guards, he struck him, and reproached him with his want of punctuality; but the latter showed him his order; and the Czar perceiving his mistake, clasped him in his arms, kissed him on the forehead, proclaimed his fidelity, and intrusted him with the custody of the traitors.

His vengeance was terrible, the punishment was more ferocious than the crime. First the rack, then the successive mutilation of each member: then death, when not enough of blood and life was left to allow of the sense of suffering. To close the whole, the heads were exposed on the summit of a column, the members being symmetrically arranged around them, as ornaments.

SINGULAR FACTS.

The human ear is so extremely sensible, that it can hear a sound that lasts only the twenty-four thousandth part of a second.

Deaf persons may converse together through rods of wood held between the teeth, or held to the throat or breast.

In water sound passes 4708 feet in a second; in air from 1130 to 1142.

In the Arctic regions persons can converse at more than a mile distant, when the thermometer is below zero.

The Romans had no titles of honour. Scipio and Cæsar were simply so called. Titles began in the court of Constantine.

The Emperor of Germany first took the title of Majesty. Kings, till the 15th or 16th century were called Highness.

The largest cannon known was cast in 1685, at Bejapoor (Hindoostan) by Anlem Geer. It is of cast metal, supposed to be partly gold, and of immense value. It is 15 feet long, near 15 in circumference, and its bore being 28 inches in diameter, it will carry a ball of 2600 pounds.

A PREDICTION VERIFIED.

Tradition has preserved a singular anecdote of John Thatcher, a son of one of the first settlers in Massachusetts. He was married in 1661 to Rebecca Winslow, and being on his way to Yarmouth, with his bride, they stopped for the night at the house of one Col. Gorham, at Barnstable. In the merry conversation with the newly married couple, an infant was introduced, about three weeks old, and the night of her birth was mentioned to Mr. Thatcher; he observed, it was on the very night when he was married, and, taking the child in his arms, presented it to his bride, saying, "Here, my dear, is a little lady, born on the same night we were married; I wish you would kiss her, for I intend to have her for my second wife." "I will, my dear," she replied, "to please you, but I hope it will be long before your intention is fulfilled." Then, taking the babe, she kissed it heartily, and so gave it into the nurse's hands. This jesting prediction was eventually verified. Mr. Thatcher's wife died, and the child, arriving at mature age, actually became his second wife in 1684.—*Salem Mercury.*

Manly Confession.—A member of the Temperance Convention at Utica, related to me the following anecdote:—"Several years since, I was in business at Albany as a grocer. One evening, a man arrived from the country with four barrels of whiskey which he sold me at the customary price, I think some less than thirty cents per gallon, and wished to get a hogshead of Jamaica rum to take back with him. I told him that I had not the rum on hand, but was expecting every hour to receive some from New-York, and if he would wait till the next day, I would supply him, to which he assented. I had the whiskey rolled into the cellar, and transferred into an old rum hogshead and manufactured, and on the following day, sold it to the same man I had bought it of, at an advance of about 75 cts. per gallon."

POETRY.

LAMENT OF MORIAN SHEHONE FOR MISS MARY BOURKE.

Translated from an Irish *keen.*

There's darkness in thy dwelling place, and silence reigns above,
And Mary's voice is heard no more like the soft voice of love.
Yes, thou art gone, my Mary dear,—and Morian Shehone
Is left to sing his song of wo, and wail for thee alone.
Oh! snow-white were thy virtues; the beautiful, the young,
The ag'd, with pleasure bent to hear the music of thy tongue,
The young with rapture gazed on thee, and their hearts in love were bound;
For thou art brighter than the sun that sheds its light around.
My soul is dark! Oh! Mary dear! thy sun of beauty's set:
The sorrowful are dumb for thee, and the grieved their tears forget;
And I am left to pour my wo above thy grave alone—
For dear wert thou to the fond heart of Morian Shehone.

Fast flowing tears above the grave of the rich man are shed,
But they are dried when the cold stone shuts in his narrow bed:
Not so with my heart's faithful love—the dark grave cannot hide
From Morian's eyes the form of grace, of loveliness, and pride.
Thou didst not fall like the sear leaf, when Autumn's chill winds blow—
'Twas a tempest and a stormy blast that laid my Mary low.
Hadst thou not friends that lov'd thee well—hadst thou not garments rare—
Wert thou not happy, Mary, wert thou not young and fair?
Then why should the dread spoiler come my heart's peace to destroy,
Or the grim tyrant tear from me my all of earthly joy?
And am I left to pour my woes above thy grave alone?
Thou idol of the faithful heart of Morian Shehone.

Sweet were thy looks, and sweet thy smiles, and kind wast thou to all;
The withering scowl of envy dare not on thy fortunes fall;
For thee thy friends lament and mourn, and never cease to weep:
Oh! that their lamentations could awake thee from thy sleep—
Oh, that thy peerless form again could meet my loving clasp.
Oh, that the cold, damp hand of Death could loose his iron grasp:
Yet, when the valley's daughters meet beneath the tall elm tree,
And talk of Mary as a dream that never more shall be;
Then may thy spirit float around like music in the air,
And pour upon their virgin souls a blessing and a prayer.
And am I left to pour my wail above thy grave alone—
Thus sinks in silence the lament of Morian Shehone.

Dublin Journal.

SECTION XXII.

NATURAL HISTORY.

THE HORSE—[Concluded.]

"In Germany we meet with very handsome Horses; but they are generally heavy and short breathed. The Hussars and Hungarians split their nostrils, with a view, they say, of giving them more breath, and also to hinder their neighing in battle. The Flemish Horses are greatly inferior to those of Holland: they have almost all large heads, flat feet, and are subject to humours in the eyes; and these two last are essential defects in coach Horses.

"According to Marmol, the Arabian Horses are descended from the wild Horses in the deserts of Arabia, of which, in ancient times, large studs were formed, which have multiplied so much, that all Asia and Africa are full of them: they are so swift, that some will outstrip the very ostriches in their course. The Arabians of the desert, and the people of Libya, breed a great number of these Horses for hunting, but neither use them in travelling nor in their wars; they send them to pasture whilst there is grass for them, and when that fails they feed them only with dates and camel's milk, which makes them nervous, nimble, and lean. They lay snares for the wild Horses, and eat the flesh of the young ones, which they affirm is very delicate food. These wild Horses are smaller than the tame ones, and are commonly ash-coloured, though there are also some white ones, and the mane and the hair of the tail is short and frizzled.

"Let an Arabian be ever so poor, he has Horses. They usually mount the Mares, experience having taught them that they bear fatigue, hunger, and thirst, better than Horses; they are also less vicious. They use them so much to be together, that they will remain so in great numbers for days together, left to themselves, without doing the least harm to each other. The Turks, on the contrary, do not approve of Mares; and the Arabians sell them the Horses which they do not keep for stallions. They have long preserved, with great care, the breed of their Horses; they know their generations, alliances, and all their genealogy, and distinguish the breeds by different names. The lowest price for a Mare of the first class, is from one hundred, to two or three hundred pounds sterling. As the Arabians have only a tent for their house, this tent serves them also for a stable. The Mare, Colt, husband, wife and children, lie promiscuously together; and the little children will lie on the body and neck of the Mare and Colt, without these animals incommoding or doing them the least injury. These Mares are so accustomed to live in this familiarity, that they will suffer any kind of play. The Arabians treat them kindly, talk and reason with them and take great care of them, always let them walk, and never use the spur without necessity: whence, as soon as they feel their flank tickled with the stirrup iron, they set out immediately with incredible swiftness, and leap hedges and ditches, with as much agility as so many does; and if their rider happens to fall, they are so well broken, that they will stop short, even in the most rapid gallop. All Arabian Horses are of a middling size, very easy in their manner, and rather thin than fat; they are dressed morning and evening regularly, with so much care, that not the smallest spot is left in their skins; their legs are also washed, and their mane and tail are permitted to grow long, and seldom combed, to avoid breaking the hairs. They have nothing given them to eat all day, and seldom are allowed to drink above two or three times; at sunset, a bag is fastened round their heads, in which is about half a bushel of very clean barley. These Horses, therefore, eat only during the night; and the bag is not taken from them till the next morning, when all is eaten up; and in the month of March, when the grass is tolerably high, they are turned out to pasture. As soon as the spring is past, they are taken again from pasture, and have neither grass nor oats all the rest of the year, and straw but seldom, barley being their only food. The mane of the Colts is cut as soon as they are a year or eighteen months old, in order to make it grow thick and long. They mount them at two years old, or two years and a half at farthest: till this age they put neither saddle nor bridle on them; and every day from morning till night, all the Arabian Horses stand saddled at the door of the tent.

"An affecting instance is on Record of the attachment which the Arabians feel for their horses. A poor Arabian of the desert was possessed only of a Mare, which the French consul at Said was desirous to purchase, that he might send her as a present to Louis XIV. The Arab hesitated long, but want drove him to consent, on condition of receiving a large sum, which he himself named. The Arab, clothed in his rags, brought his courser to the consul, dismounted, looked first at the tempting gold, and then steadfastly at his mare. But here his heart failed. He heaved a deep sigh, and fondly exclaimed, "To whom am I going to give thee up? to Europeans! who will tie thee close, who will beat thee, who will render thee miserable! Return with me, my beauty! my jewel! and rejoice the hearts of my children." Then springing on the back of the animal, he was out of sight in a moment.

"The breed of these Horses is dispersed in Barbary, among the Moors, and even among the Negroes of the river Gambia and Senegal; the lords of the country have some which are of uncommon beauty. Instead of barley or oats, they give them maize reduced to flour, which they mix with milk, when they are inclined to fatten them; and in this hot climate they seldom let them drink.

"The Tartars live with their horses nearly in the same manner as the Arabians do. When they are about seven or eight months old the young children mount them, and make them walk and gallop a little way by turns; they thus break them by degrees, and oblige them to undergo long fastings; but they never mount them for racing or hunting till they are six or seven years old, and then make them support incredible fatigue, such as travelling two or three days together without stopping, passing four or five days without any other food than a handful of grass every eight hours, and also inure them to go twenty-four hours without drinking. These Horses, which appear, and which are in reality, so robust in their own country, become enfeebled, and are soon good for nothing, when transported to China or the Indies; but they succeed better in Persia and Turkey. In Lesser Tartary they have also a breed of small Horses, which are in such estimation that they are not allowed to sell them to foreigners. These Horses have all the good and bad qualities of those of Great Tartary, which shows how much the same manners, and the same education, give the same disposition to these animals. There are also in Circassia, and in Mingrelia, many Horses which are even handsomer than those of Tartary; there are also found some handsome Horses in the Ukraine, Wallachia, Poland and Sweden; but we have no particular account of their qualities and defects.

"When the Horse is impassioned with love, desire, or appetite, he shows his teeth, and seems to laugh; he shows them also when angry, and would bite; he sometimes puts out his tongue to lick, but less frequently than the ox, who licks much more than the Horse, and who, notwithstanding, is less sensible to caresses.

"The Horse also remembers ill treatment much longer, and is sooner rebuffed than the ox; his natural spirit and courage are such, that when he finds more is expected from him than he is able to perform, he grows angry, and will not endeavour; instead of which, the ox, who is slow and idle, exerts himself and is more easily tired. That they are capable of feeling resentment is proved by a curious circumstance. A baronet, who was in possession of a hunter which seemed to be untirable, resolved to try if he could not completely fatigue him. After a long chase, he dined, mounted him again, and rode him furiously among the hills, till the animal was so exhausted that he reached the stable with infinite difficulty. More humane than his worthless master, the groom shed tears to see the state of the animal. Shortly afterward, on the baronet entering the stable, the Horse furiously sprung at him, and he would have perished had he not been rescued by the groom.

"The Horse sleeps much less than man; for when he is in health, he does not rest more than two or three hours together; he then gets up to eat; and when he has been too much fatigued, he lies down a second time, after having eaten; but, on the whole, he does not sleep more than three or four hours in the twenty-four. There are even some Horses who never lie down, but sleep standing. It has been also remarked, that Geldings sleep oftener and longer than Horses.

"The swiftness and strength of the Horse are wonderful. Childers, the race Horse, has been known to pass over eighty-two feet and a half in a second. Others have trotted more than twenty-one miles in an hour. There have been mill horses, which, at one load, have carried thirteen measures, or nine hundred pounds weight of corn.

"Quadrupeds do not all drink in the same manner, though they are all equally obliged to seek with the head for the liquor, which they cannot get in any other way, excepting the monkey, and some others that have hands, and consequently drink like men, when a vase or glass is given them which they can hold; for they carry it to their mouths, inclining the head, throwing down the liquor, and swallowing it by the simple motion of deglutition. Man usually drinks in the same manner, because it is the most convenient. Most quadrupeds also choose that mode which is most agreeable to them, and constantly follow it. The dog, whose mouth is very large, and the tongue long and thin, drinks lapping; that is, by licking the liquor, and forming with the tongue a kind of cup or scoop, which fills each time with a tolerable quantity of liquor; and this mode he prefers to that of wetting the nose. The Horse, on the contrary, whose mouth is small, and whose tongue is too short and thick to scoop it up, and who always drinks with more avidity than he eats, dips the mouth and nose quickly and deeply into the water, which he swallows largely by the simple motion of deglutition; but this forces him to drink without fetching his breath; whilst the dog breathes at his ease while he is drinking. Horses therefore should be suffered to take several draughts, especially after running, when respiration is short and quick. They should not be suffered to drink the water too cold, because that, independently of the colic, which cold water frequently occasions, it sometimes happens also, from the necessity they are in of dipping the nose into the water, that they catch cold, which often lays the foundation of a disorder called the glanders, the most formidable of all to that species of animal; for it is known, that the seat of the glanders is in the pituitary membrane, and that it is consequently a real cold, which causes an inflammation in this membrane; and travellers who give us detail of the maladies of Horses in warm climates, as in Arabia, Persia, and Barbary, do not say that the glanders are so frequent there as in cold climates. It is from this that the conjecture arises, that this malady is occasioned by the coldness of the water, because these animals are obliged to dip and keep the nose and nostrils a considerable time under water, which would be prevented by never giving it to them cold, and by always wiping the nostrils after they have drank. Asses, who fear the Cold more than Horses, and who resemble them more strongly in the interior structure, are, notwithstanding, not so subject to the glanders; which may possibly happen from their drinking in a different manner from Horses; for, instead of dipping the mouth and nose deeply into the water, they scarcely touch it with their lips.

"I shall not speak of the other diseases of Horses; it would extend this Natural History too much to join to the history of an animal that of its disorders; nevertheless, I cannot leave the history of the Horse, without regretting that the health of this useful animal should have been hitherto abandoned to the care, and too frequently absurd practice of ignorant people. The branch of physic which the ancients called Veterinarian, is at present scarcely known but by name. Were some physician to direct his views this way, and make this study his principal object, he would soon find it answer his purpose, both with respect to reputation and profit. Instead of degrading himself, he would render his name illustrious; and this branch of physic would not be so conjectural and difficult as the other. All causes being more simple in animals than in man, the diseases ought also to be less complicated, and consequently more easily to be guessed at, and treated with more success, without mentioning the entire liberty he would have of making experiments and finding out new remedies, and the ability of arriving without fear or reproach at a great extent of knowledge of this kind, from which, by analogy, might also be drawn inferences useful to the art of curing mankind. Among the brutal acts which are committed upon Horses, may be reckoned the absurd and inhuman practices of docking and nicking their tails, and applying the shoe red-hot to the sole of the foot."

SHETLAND PONY.

"The Shetland Pony called in Scotland *Sheltie*, an inhabitant of the extreme northern Scottish isles, is a very diminutive animal, sometimes not seven hands and a half in height, and rarely exceeding nine and a half. He is often exceedingly beautiful, with a small head, good tempered countenance, a short neck, fine towards the throttle, shoulders low and thick, (in so little a creature far from being a blemish.) back short, quarters expanded and powerful, legs flat and fine, and pretty round feet. They possess immense strength for their size, will fatten on any thing, and are perfectly docile. One of them, nine hands or three feet in height, carried a man of twelve stone, forty miles in one day."

THE ASS.

"If we consider this animal with some degree of attention, he appears only to be a horse degenerated. The perfect similitude in the conformation of the internal parts, and the great resemblance of the body, legs, feet, and the entire skeleton, is a sufficient foundation for this opinion; we may also attribute the slight differences which are found between these two animals, to the influence of the climate, food, and the fortuitous succession of many generations of small wild horses, half degenerated, which, by little and little, have still continued degenerating, and have at last produced a new and fixed species; or rather a succession of individuals alike, all vitiated in the same manner, sufficiently differing from a horse, to be looked upon as another species. What appears to favour this notion is, that as horses vary much more than Asses in the colour of their skin, they are consequently more anciently domestic, since all domestic animals vary much more in their colour than wild ones of the same species; that the greater number of wild horses, of which travellers speak, are small in their size, and have, like Asses, the coat gray, and the tail naked and frizzled at the end; and, that there are wild horses, and even domestic ones, which have a black stripe on the back, and other marks, which nearly resemble both wild and domestic Asses.

"But if we consider the difference of the temperament, disposition, and manners; in a word, the organism of these two animals, and above all, the impossibility of mixing the breed to make one common species, or even an intermediate species which may be renewed; it appears a better founded opinion, that these animals are of a species equally ancient, and originally as essentially different as they are at present; as the Ass differs materially from the horse, in the smallness of the size, the largeness of the head, the length of the ears, the hardness of the skin, the nakedness of the tail, the form of the rump, and also in the voice, the appetite, the manner of drinking, &c. Do the horse and the Ass, then, come originally from the same stock? are they of the same family, or not? and have they not always been different animals?

"Although we cannot demonstrate that the production of a species by degeneration is a thing impossible in nature, yet the number of probabilities to the contrary is so great, that even philosophically, we can no longer doubt it; for if some species have been produced by the degeneration of others, if the species of the Ass comes from the species of the horse, this can only have happened successively; and by degrees there would have been, between the horse and the Ass, a great number of intermediate animals, the first of which would have differed but slightly in its nature from the horse, and the latter would have approached by degrees to that of the Ass; and why do we not see the representatives, the descendants of these intermediate species? why do only the two extremes remain?

"The Ass is then an Ass, and not a horse degenerated; the Ass has a naked tail; he is neither a stranger, an intruder, nor a bastard; he has, like all other animals, his family, his species, and his rank; his blood is pure; and although his nobility is less illustrious, yet it is equally good, equally ancient with that of the horse. Why then have we so much contempt for this animal: so good, so patient, so steady, so useful? Why do men carry their contempt even to animals, those which serve them so well; and at so small an expense? We bestow education on the Horse, take care of him, instruct him, and exercise him, whilst the Ass is abandoned to the care of the lowest servant, or to the tricks of children; so that, instead of improving, he must lose by his education; and if there were not a fund of good qualities, he would certainly lose them by the manner in which he is treated. He is the may-game of the rustics, who beat him with staffs, overload him, and make him work beyond his strength. We do not consider, that the Ass would be in himself, and with respect to us, the most beautiful, the best formed, and the most distinguished of animals, if there were no horse in the world; he is the second, instead of being the first; and it is from that only, that he appears to be of no value: the comparison degrades him; we look at him, and give our opinions not from himself, but comparatively with the horse: we forget that he is an Ass, that he has all the good qualities of his nature, all the gifts attached to his species; and at the same time, we only think of the figure and qualities of the Horse, which are wanting in him, and which he ought not to have.

"He is naturally as humble, patient, and quiet, as the horse is proud, ardent, and impetuous; he suffers with constancy, and perhaps with fortitude, chastisement and blows; he is moderate both as to the quantity and quality of his food; he is contented with the hardest and most disagreeable herbs, which the horse and other animals will leave with disdain; he is very delicate with respect to his water, for he will drink none but the clearest, and from rivulets with which he is acquainted; he drinks as moderately as he eats, and does not put his nose in the water (through fear as some say, of the shadow of his ears:) as care is not taken to currycomb him, he frequently rolls himself on the grass and thistles, and in the dust; and, without regarding his load, he lays himself down to roll about as often as he can, and by this seems to reproach his master for the little care he takes of him; for he does not paddle about in the mud and in the water; he even fears to wet his feet, and will turn out of his road to avoid the mud; his legs are also drier and cleaner than the horse; he is susceptible of education, and some have been seen sufficiently disciplined to be made a show of.

"In their earliest youth they are sprightly and even handsome; they are light and genteel; but, either from age or bad treatment, they soon become slow, indocile, and headstrong. Pliny assures us, that when they separate the mother from the young one, she will go through fire to recover it. The Ass is also strongly attached to his master, notwithstanding he is usually ill treated; he will smell him afar off, and can distinguish him from all other men; he also knows the places where he has lived, and the ways which he has frequented: his eyes are good, and his smell acute; his ears are excellent, which has also contributed to his being numbered among timid animals, which it is pretended have all the hearing extremely delicate, and the ears long; when he is overloaded, he shows it by lowering his head and bending down his ears; when he is greatly abused, he opens his mouth, and draws back his lips in a most disagreeable manner, which gives him an air of derision and scorn; if his eyes are covered over, he remains motionless; and when he is laid down on his side and his head is fixed in such a manner that one eye rests on the ground, and the other is covered with a chip of wood, he will remain in this situation without any motion or endeavour to get up: he walks, trots, and gallops like the horse; but all his motions are smaller, and much slower; notwithstanding he can run with tolerable swiftness, he can gallop but a little way, and only for a small space of time; and whatever pace he uses, if he is hard pressed, he is soon fatigued.

"The horse neighs, and the Ass brays, which he does by a long, disagreeable, and discordant cry. The she Ass has the voice clearer and shriller; those that are gelded bray very low; and though they seem to make the same efforts, and the same motions of the throat, yet their cry cannot be heard far off.

"Of all the animals covered with hair, the Ass is least subject to vermin; he has never any lice, which apparently proceeds from the hardness and dryness of the skin, which is certainly harder than in the greatest part of other quadrupeds; and it is for the same reason that he is much less sensible than the horse to the whip, and the sting of the flies.

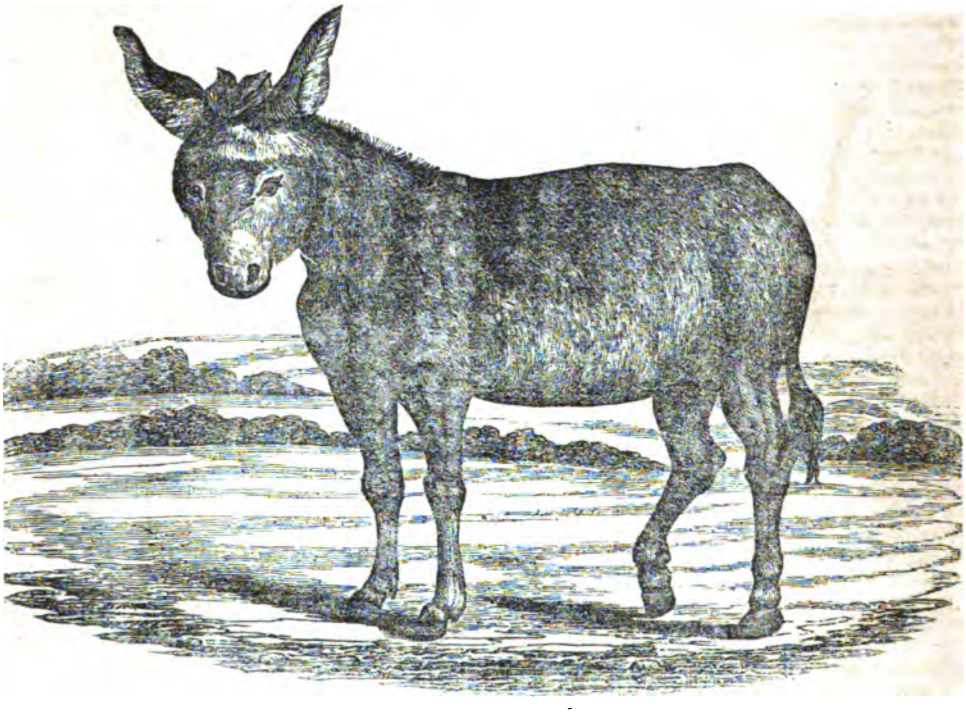
"At two years and a half old, the first middle incisive teeth fall out, and afterward the other incisive at the side of the first fall also, and are renewed at the same time and in the same order as those of the horse; the age of the Ass is also known by his teeth; the third incisive on each side ascertains it, as in the horse.

"The Ass is three or four years in growing, and lives twenty-five or thirty years. He sleeps less than the horse, and does not lie down to sleep unless when quite tired.

"There are among Asses different races, as among horses; but they are much less known, because they have not been taken the same care of, or followed with the same attention; but we cannot doubt that they came all originally from warm climates. Aristotle assures us, that there were none in his time in Scythia, nor in the other neighbouring countries of Scythia, nor even in Gaul, which he says, is a cold climate; and he adds, that a cold climate either prevents them from procreating their species, or causes them to degenerate; and that this last circumstance is the reason that they are small and weak in Illyria, Thrace, and Epirus. They appear to have come originally from Arabia, and to have passed from Arabia into Egypt, from Egypt into Greece, from Greece into Italy, from Italy into France, and afterward into Germany and England, and lastly into Sweden, &c.; for they are, in fact, weak and small in proportion to the coldness of the climate. They are said to have been introduced into England subsequently to the reign of Elizabeth. Of all the various breeds of Asses, the Spanish breed is by far the finest. They are often found of the height of fifteen hands, and the value of a hundred guineas.

"The Latins, after the Greeks, have called the Wild Ass Angra; which animal must not be confounded, as some naturalists and many travellers have done, with the zebra.

"The Angra or Wild Ass is not striped like the zebra, and is not near so elegant in figure. Wild Asses are found in some of the islands of the Archipelago, and particularly in that of Cerigo; there are also many in the deserts of Libya and Numidia; they are gray, and run so fast that the horses of Barbary only can beat them in hunting. When they see a man, they give a loud cry, turn themselves about and stop, and do not attempt to fly till they find he comes near them; they are taken in snares made with ropes, and go in troops both to pasturage and to drink; their flesh is also eaten. There were also in the time of Marmol, Wild Asses in the island of Sardinia, but less than those of Africa; and Pietro della Valle says, he has seen a Wild Ass at Bassora, whose figure differed in no respect from a domestic one; he was only of a lighter colour, and had, from the head to the tail, a stripe of white; he was also much livelier, and lighter in hunting than Asses usually are.



THE ASS.

"Neither Asses nor horses were originally found in America, though the climate, especially of North America, is as good for them as any other: those which the Spaniards have transported from Europe, and which they have left in the West Indies and on the Continent, have greatly multiplied; and in some parts Wild Asses are found in troops, and are taken in snares like wild horses. The Wild Asses of America will not suffer a horse to live among them. Wo to the horse that chances to stray into the pasture where they are feeding in bands. They fall upon him, and bite and kick him, till he ceases to exist.

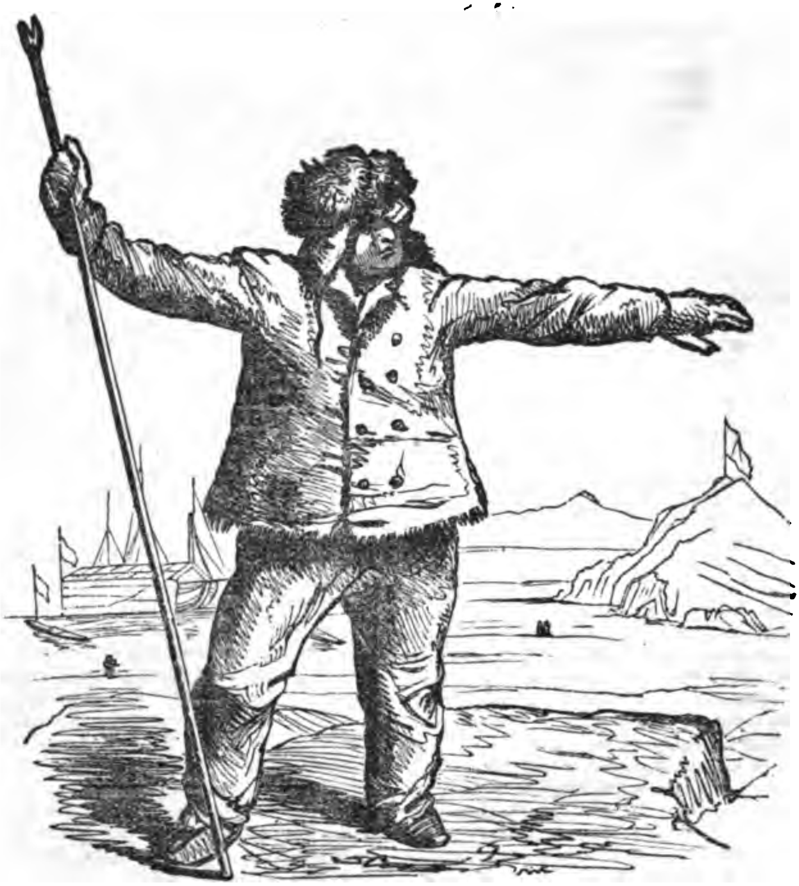
"The Ass with the mare produces large mules, and the horse with the she Ass produces small mules, differing from the first in many respects.

"As Wild Asses are unknown in these climates, we cannot in reality say whether the flesh is good to eat; but it is certain that the flesh of the domestic Ass is extremely bad, and harder than that of the horse. The milk of the Ass, on the contrary, is an approved and specific remedy for certain complaints, and its use was known from the Greeks to us: that it may be good in its kind, we should choose a young healthy she Ass, full of flesh, which has lately foaled, and which has not since been with the male: care must be taken to feed her well with hay, wheat, and grass, with particular care not to let the milk cool, and not even to expose it to the air, which will spoil it in a little time.

"The skin of the Ass is used for different purposes, such as to make drums, shoes, &c. and thick parchment for pocket books, which is slightly varnished over: it is also of Asses' skin that the orientals make the sagri, which we call shagreen. The roughness of the latter, however, is produced by art.

"The Ass is perhaps with respect to himself, the animal which can carry the greatest weight; and as it costs but little to feed him, and he scarcely requires any care, he is of great use in the country, at the mill, &c.; he also serves to ride on, as all his paces are gentle, and he stumbles less than the horse: he is frequently put to the plough in countries where the earth is light, and his dung is an excellent manure to enrich hard moist lands. In many parts of South America he is valued higher than the horse.

"The Ass, like some other animals, and some birds, possesses in great perfection the power of finding his way home, when lost at a great distance. An instance of this is recorded by Kirby and Spence, in their excellent Introduction to Entomology. In March, 1816, an Ass, the property of Captain Dundas, R. N. then at Malta, was shipped on board the Ister frigate, Captain Forrest, bound from Gibraltar to that island. The vessel having struck on some sands off the Point de Gat, at some distance from the shore, the Ass was thrown overboard, to give it a chance of swimming to land; a poor one, for the sea was running so high, that a boat which left the ship was lost. A few days afterward, however, when the gates of Gibraltar were opened in the morning, the Ass presented himself for admittance, and proceeded to the stable of Mr. Weeks, a merchant, which he had formerly occupied, to the no small surprise of this gentleman, who imagined that, from some accident the animal had never been shipped on board the Ister. On the return of this vessel to repair, the mystery was explained; and it turned out that Valiante (as the Ass was called,) had not only swam safely to shore, but, without guide, compass, or travelling map, had found his way from Point de Gat to Gibraltar, a distance of more than two hundred miles, through a mountainous and intricate country, intersected by streams, which he had never traversed before, and in so short a period, that he could not have made one false turn. His not having been stopped on the road was attributed to the circumstance of his having formerly been used to whip criminals upon, which was indicated to the peasants, who have a superstitious horror of such Asses, by the holes in his ears, to which the persons flogged were tied."



CAPTAIN ROSS, IN HIS POLAR DRESS.

[Having given the History of the different expeditions which have been fitted out to explore the North West passage, in our former numbers, together with illustrations of several scenes described therein, we now present our readers with a likeness of Captain Ross, with whom they are all familiar, in his Polar Dress—as taken from the PANORAMA of Boothia, by MR. BURFORD.]

All who have read Captain Ross' Outline, will feel anxious to witness the gallant officer's *filling in*, of his recent discoveries. The Panorama just completed by Mr. Burford will gratify this curiosity; for, independently of its attractions as a picture, (and these are of first-rate merit and interest,) the Panorama bears the highest recommendation in authenticity of detail. The reader may imagine that so desolate a country as the scenes of these discoveries could furnish but few, if any, picturesque features which might recommend them to the painter. Such an erroneous inference will, however, be removed by a single glance at this picture, which presents a changeful assemblage of the sublimities of creation. Here we have not merely thrilling regions of thick-ribbed ice below, but a display of splendid phenomena above. The enterprise of the navigators relieves the desolation of the country: the spectator will not exclaim

"clear, but, oh! how cold;"

for the splendour of the stars and the brilliant coruscations of the Aurora, will raise his thoughts and affections from earth to the silent contemplation of the majesty of Heaven. Such, however, will be but a few impressions on viewing this sublime scene, than which it is difficult to conceive a more awe-inspiring subject for art to accomplish, or the ingenuity of a man to represent.

A few passages from Mr. Burford's explanatory pamphlet will best bespeak the interest of the details.

" The present Panorama, taken from drawings made by Captain Ross, has been painted under his immediate inspection. It represents the winter quarters of the Victory, in 1830, in latitude 70° north, longitude 92° west; and the spectators are placed in the actual tent in which the gallant Captain passed the nights during his long and dreary journey of nearly 500 miles from Victory Harbour to Batty Bay. The dismantled vessel firmly beset by the ice in Felix Harbour, every part of her masts, yards, and shrouds, on which it could lodge, covered with snow, forms a conspicuous object, and gives cheerfulness to the scene, by affording certain indications of the presence of human beings. The sea around presents one continued field of ice—towering icebergs of gigantic size and singularly fantastic form—immense masses thrown up by pressure, called hummocks, pyramids, cavities, and an endless variety of forms heaped together in wild disorder, from some huge stalactitæ, are gracefully pendant; others are surrounded by sparry crystals and brilliant icicles, the prominent surfaces tinged with the most vivid emerald and violet tints, and the most intense blue shades lurking in the recesses, presenting a splendid exhibition of icy grandeur.

" The continent, called by Captain Ross, Boothia, and some small islands, present nearly the same appearance, and are only distinguishable from the ocean, by the bare sides of steep and precipitous rocks, which occasionally rise to a great height presenting horizontal and perpendicular strata of primitive granite; in some places vast masses are piled with extreme regularity, in others so confused, that they evidently mark some violent convulsion of nature. These dark and frowning precipices, without the least marks of vegetation, form a singular contrast with the pinnacles of ice, and the sparkling whiteness of the surrounding snow. At a short distance, an Esquimaux village rears the dome-shaped tops of its snow-built huts, and a party of these interesting people are represented on their way to pay their first visit to the ship, whose extraordinary appearance and dress, and grotesque manners, considerably relieve the scene. Beyond, on every side, the eye stretches over one interminable field of ice and snow, whose very barrenness is beautiful, but which conveys a feeling of total privation and utter desolation. Towards the south the horizon is overspread by an arch of bright and splendid crimson light, which was always visible about noon, even when the sun was at its greatest southern declination; indeed, the return of what might be considered day, was always marked by so considerable a twilight, that by turning a book towards the south, the smallest print might be read without difficulty; and the brightness of the moon and stars, together with the reflection from the snow, rendered any thing approaching a deep or positive gloom of rare occurrence. The opposite portion of the hemisphere is splendidly illumined by that extraordinary and beautiful phenomenon, the Aurora Borealis, vividly darting its brilliant coruscations towards the zenith in endless variety, and tinging the ice and snow with its pale and mellow light; the remaining portions of the sky are clear, dark, and unclouded, thickly studded with numberless stars, shining with peculiar lustre; the whole forming a striking and romantic scene difficult to conceive, and impossible to describe; the awful grandeur and sublimity of which, cannot be contemplated but with the most intense interest, and enthusiastic admiration."

The following account, from the pen of Captain Ross himself, will not be deemed supererogatory.

" The situation of this Panorama, is half a mile northward of Felix Harbour, in the newly discovered country, named by Captain Ross 'Boothia Felix,' and is in latitude 70° north, and longitude 92° west, the land is entirely of primitive formation, the rocks being composed of various kinds of granite, and destitute of vegetation, except in the valleys, in some of which are lakes of a considerable size, but frozen over, excepting a part of July, August, and September. Rein-deer, hares, and foxes were seen here, and two kinds of grouse, and bears were also constantly ranging along the coast. The time at which this view was taken, was the 9th of January, 1830, at noon. After having communicated with an interesting tribe of natives, Captain Ross and his officers having obtained their confidence, by giving them presents, persuaded them to accompany his party to the Victory, which is represented frozen in at Felix Harbour, with her colours and flags flying. The ship is housed in, or, in other words, covered over with a roof of canvass; the bow is exposed to view, but the starboard, or gangway side, is protected by a wall of snow within which the men usually exercised, when too stormy to walk on shore, or at a distance. The island to the left of her forms the harbour, and on it the observatory was erected, and contained a three feet transit instrument, and a six feet telescope, at which an officer is represented looking at the planet Venus; this is decorated with flags, as well as the magnetic observatory at a more distant point. Beyond, at a great distance, is seen King William's Land, which, since Captain Ross's return, has been so named with his Majesty's gracious permission, as well as the position of the magnetic pole, which is behind the high land to the right of the ship, and is named Boothia Felix, in honour of Felix Booth, Esq. the patriotic friend of Captain Ross, and on the point of which, near a gun, is planted his flag. Going on again to the right, will be seen the village of the natives, consisting of eighteen huts, built entirely of snow; and round the point is Sheriff's Harbour, where the expedition passed the second and most severe winter. On this side of the most distant point, called Cape Margaret, is Victory Harbour, distant fifteen miles, where the third winter was spent, and where the ship was left in May, 1832. The next to the right is Isabella Louisa, or Lady Parry's Island, which being nearest to Sir E. Parry's discoveries, is so named in compliment to that distinguished officer; and the lands which close in with that first mentioned, are those visited, after much peril and labour, by Mr. Thom and Dr. M'Diarmid, in March, 1830. In the fore ground are seen the officers and the natives proceeding to the ship. Illictu, the old man, which had been placed in the front of the natives, when formed into a body, is seen on a sledge drawn by Captain Ross and his party of sailors. Tullooachiu, the man who had lost a leg, is seen on another sledge, drawn by Commander James Ross and another party; the rest of the natives are following, and, by signs and gestures, expressing their surprise at every object which is new and wonderful to them.

" To the South, looking towards the Victory, is seen the horizon, as it is illuminated at noon, as the sun passes some degrees below the horizon. Venus is seen to the left, and the fixed stars are every where shining as seen at noon. In opposition or in the north, is seen the Aurora Borealis, as it generally appears, shooting its pencil rays upwards, or towards the zenith. The tints which these phenomena give the surrounding hills are also given with striking effect."

The cut represents Captain Ross in his Polar dress: to his right is the position of the magnetic pole, denoted by the royal Standard of England; and on the opposite side is the Victory, walled in with frozen snow.

Of the beautiful execution of the Panorama, description would impart but an unequal idea. The stars are cleverly managed by the aid of tinsel, and their effect is strikingly exquisite.—*London Mirror.*

MYTHOLOGY.

VIRTUE AND HONOUR.

"Virtue derives her name from *vir*, because virtue is the most manly ornament. She was esteemed a goddess, and worshipped in the habit of an elderly matron, sitting upon a square stone. M. Marcellus dedicated a temple to her, and hard by placed another, that was dedicated to Honour: the temple of Virtue was the passage to the temple of Honour; hence by virtue alone, true honour is attained.

FIDES OR FAITH.

"Fides had a temple at Rome, near the capitol, which Numa Pompilius, it is said, first consecrated to her. Her sacrifices were performed without slaughter or blood. The heads and hands of the priests were covered with a white cloth when they sacrificed, because faith ought to be close and secret. Virgil calls her Cana Fides, either from the candour of the mind, whence fidelity proceeds, or because faith is chiefly observed by aged persons. The symbol of this goddess was a white dog, which is a faithful creature. Another symbol was two hands joined, or two young ladies shaking hands; for by giving the right hand, they engaged their faith for their future friendship.

HOPE.

"Hope had a temple at Rome, in the herb-market, which was unfortunately burnt down with lightning. Giraldus says, that he has seen her effigies in a golden coin of the emperor Adrian. She was described in the form of a woman standing; her left hand lightly held up the skirts of her garments; she leaned on her elbow; and in her right hand held a plate, on which was placed a *ciberium*, a sort of cup, fashioned to the likeness of a flower, with this inscription: SPES P. R. "The Hope of the People of Rome." We have already related in what manner Hope was left, and preserved in the bottom of Pandora's box.

PIETY.

"Attilius, the duumvir, dedicated a chapel to Piety, at Rome, in the place where that woman lived who fed her mother in prison with the milk of her breasts. The story is thus. The mother was punished with imprisonment; her daughter, who was an ordinary woman, then gave suck; she came to the prison frequently, and the jailor always searched her, to see that she carried no food to her mother: at last she was found giving suck to her mother with her breasts. This extraordinary act of the daughter gained the mother's freedom and they both were afterwards maintained at the public charge, and the place was consecrated to the goddess Piety. There is a like example in the Grecian history, of a woman who by her breasts nourished Cymon, her aged father, who was imprisoned, and supported him with her own milk.

MERCY.

The Athenians erected an altar to *Misericordia*, "Mercy," where was first established an asylum, a place of common refuge to the miserable and unfortunate. It was not lawful to force any from thence. When Hercules died, his kindred feared some mischief from those whom he had afflicted; therefore they erected an asylum, or temple of mercy at Athens.

JUSTICE.

"Justice was described like a virgin, with a piercing steadfast eye, a severe brow, her aspect awful, noble, and venerable. Alexander says, that among the Egyptians she had no head, and that her left hand was stretched forth, and open. The Greeks called her Astræa.

CLEMENCY.

"Nothing memorable occurs concerning the goddess Clemency, unless that there was a temple erected to Clementia Cæsaris, "The Clemency of Cæsar," as we read in Plutarch.

CHASTITY.

"Two temples at Rome were dedicated to Chastity; the one to Pudicitia Patricia, which stood in the oxmarket; the other to Pudicitia Plebeia, built by Virginia, the daughter of Aulus: for when she, who was born of a patrician family, had married a plebeian, the noble ladies were mightily incensed, and banished her from their sacrifices, and would not suffer her to enter into the temple of Pudicitia, into which senatorian families only were permitted entrance. A quarrel arose upon this among the women, and a great breach was made between them. This induced Virginia, by some extraordinary action, to blot out the disgrace she had received; and therefore, she built a chapel in the long street where she lived, and adorned it with an altar, to which she invited the plebeian matrons, and complained to them that the ladies of quality had used her so barbarously: "I dedicate," says she, "this altar to Pudicitia Plebeia; and I desire of you that you will as much adore Chastity, as the men do Honour; that this altar may be followed by purer and more chaste votaries than the altar of Pudicitia Patricia, if it be possible." It is said in history, that the women, who were contented with one marriage, were usually rewarded with a crown of chastity.

TRUTH.

"Truth, the mother of Virtue, is painted in garments as white as snow; her looks are serene, pleasant, courteous, cheerful, and yet modest; she is the pledge of all honesty, the bulwark of honour, the light and joy of human society. She is commonly accounted the daughter of Time or Saturn, because truth is discovered in the course of time: but Democritus feigns that she lies hidden at the bottom of a well.

CONCORDIA.

"We shall find by the concurrent testimony of many, that the goddess Concordia had many altars at several times dedicated to her; but she was especially worshipped by the ancient Romans, her image held a bowl in her right hand, and a horn of plenty, or a sceptre from which fruit seemed to sprout forth in her left. The symbol of Concord was two right hands joined together and a pomegranate.

PAX.

"Pax was honoured formerly at Athens with an altar, as Plutarch tells us. At Rome she had a most magnificent temple in the Forum, begun by Claudius and finished by Vespasian; which was afterwards consumed in a fire under Emperor Commodus. She was described in form of a matron, holding forth ears of corn in her hands, and crowned with olives and laurel or sometimes roses. Her particular symbol was a *caduceus*, a white staff borne by ambassadors when they go to treat of peace."

PRESENT SOVEREIGN OF PERSIA.

The ruling passion of Futeh Alli Shah is an insatiable desire of accumulating wealth, which has proved more injurious to his kingdom than all the efforts of his enemies. His avarice is in fact the jest as well as bane of the peeple. If a fruit or sweetmeat come early in season, he sends a portion to his favourites, who are obliged to acknowledge the honour by a valuable return, besides rewarding the messenger. He one day made fifteen hundred tomans in this way, out of a rupee which he found by accident, and with which he purchased apples to distribute in these costly presents. He has a practice also of inveigling his courtiers into bets about his shooting, in which he is sure to gain; for not only is he an excellent marksman, but the attendants take care, by cutting the throats of the sheep at which he has fired, to protect their sovereign's fame and his purse at the same time. The most degrading of his expedients to amass money is that of selling his daughters, and even his wives, to individuals generally of noble rank, for large sums, and assuredly not always with the consent of either party. To divorce a wife for the purpose of selling her is directly contrary to the spirit of the Mohammedan law; yet the king, though professing himself an orthodox Mussulman, has been guilty of this scandal more than once, and has fastened a spouse on some unfortunate man who was forced to pay a large sum for an encumbrance which he was most earnestly desirous to avoid. The darkest stains on this monarch's character, however, are the murder of his uncle Saduk, and his ungrateful conduct to his old zealous minister Hajii Ibrahim. The assassination of his relative might have been defended on the stern necessity of state policy; but that could not palliate the treachery and cruelty which accompanied the act. Saduk Khan, unable to struggle with his nephew, had surrendered on a secret promise that he should not be put to death. The king confined his victim in a room, built up the doors and windows, and left him to die by inches, conceiving this to be no violation of his oath. When the apartment was opened, it was discovered that the miserable captive had dug deep in the floor with his hand, and swallowed the clay to assuage the pangs of hunger.—*Edinburgh Cabinet Library.*

ORIGIN OF WARS.

The history of every war is very like a scene I once saw in Nithsdale. Two boys from different schools met one fine day upon the ice. They eyed each other with rather jealous and indignant looks, and with defiance on each brow. "What are ye glowrin' at Billy?" "What's that to you? I'll look where I have a mind; an' hinder me if you daur." A hearty blow was the return to this, and then such a battle began. It being Saturday, all the boys of both schools were on the ice; and the fight instantly became general and desperate. I asked one of the party what they were pelting the others for? "O, naething at a' man; we just want to gie them a good thrashing'." After fighting till they were quite exhausted, one of the principal heroes stepped forth between, covered with blood, and his clothes in tatters, and addressed the belligerant parties thus: "Weel, I'll tell ye what we'll do wi' ye: if ye'll let us alane, we'll let ye alane." There was no more of it: the war was at an end, and the boys scattered away to their play. I thought at the time, and have often thought since, that that trivial affray was the best epitome of war in general that I have ever seen. Kings and ministers of state are just a set of grown up children, exactly like the children I speak of, with only this material difference. that instead of fighting out the needless quarrels they have raised, they sit in safety and look on, send out their innocent but servile subjects to battle, and then, after a waste of blood and treasure, are glad to make the boys' conditions, "If ye'll let us alane, we'll let ye alane."

POETRY.

TO A MOSCHETO.—N. Y. REVIEW.

Fair insect, that, with thread-like legs spread out,
  And blood-extracting bill, and filmy wing,
Dost murmur, as thou slowly sail'st about,
  In pitiless ears, full many a plaintive thing,
And tell'st how little our large veins should bleed,
  Would we but yield them freely to thy need;

* * * * *

I call thee stranger, for the town, I ween,
  Has not the honour of so proud a birth;
Thou com'st from Jersey meadows, broad and green,
  The offspring of the gods, though born on earth.

* * * * * *

At length thy pinions fluttered in Broadway—
  Ah, there were fairy steps, and white necks kissed
By wanton airs, and eyes whose killing ray
  Shone through the snowy veils like stars through mist!
And, fresh as morn, on many a cheek and chin,
Bloomed the bright blood through the transparent skin.

O, these were sights to touch an anchorite!—
  What, do I hear thy slender voice complain?
Thou wailest, when I talk of beauty's light,
  As if it brought the memory of pain:
Thou art a wayward being—well, come near,
And pour thy tale of sorrow in my ear.

What say'st thou, slanderer? "Rouge makes thee sick,
  And China bloom at best is sorry food;
And Rowland's Kalydor, if laid on thick,
  Poisons the thirsty wretch that bores for blood?"
Go, 'twas a just reward that met thy crime—
But shun the sacrilege another time.

That bloom was made to look at, not to touch,
  To worship, not approach that radiant white;
And well might sudden vengeance light on such
  As dared, like thee, most impiously, to bite.
Thou should'st have gazed at distance, and admired,
Murmured thy adoration, and retired.

Thou'rt welcome to the town; but why come here
  To bleed a brother poet, gaunt like thee?
Alas the little blood I have is dear,
  And thin will be the banquet drawn from me.
Look round—the pale-eyed sisters, in my cell,
Thy old acquaintance, Song and Famine, dwell.

Try some plump alderman; and suck the blood
  Enriched with generous wine and costly meat;
In well-filled skins, soft as thy native mud,
  Fix thy light pump, and raise thy freckled feet.
Go to the men for whom, in ocean's halls,
The oyster bleeds, and the green turtle sprawls.

There corks are drawn, and the red vintage flows,
  To fill the swelling veins for thee; and now
The ruddy cheek, and now the ruddier nose,
  Shall tempt thee as thou flittest round the brow;
And when the hour of sleep its quiet brings,
No angry hand shall rise to brush thy wings.

SECTION XXIII.

HISTORY.

GREECE.

The **Greeks** are an ancient people, whose origin is clouded with fable. All that we know, during the present or preceding period, of the descendants of Japhet, who peopled Europe, is comprised in the history of this nation.

We date the commencement of the Greeks, as a community, from the founding of Argos by Inachus, who arrived in Greece, from Phœnicia, 1856 B. C. Sicyon is by some thought to have been founded before; but we incline to the opinion that Egialtes, a son of Inachus, was the founder of Sicyon.

The ancient inhabitants of Greece were extremely rude and savage, scarcely one degree superior to the brutes. They lived on herbs and roots, and lay either in the open fields, or, at best, sheltered themselves in dens, clefts, and hollow trees. An improvement of their condition occasionally took place; but Greece for some ages, was in a continual state of fluctuation. They were unacquainted with letters till the time of Cadmus, who is hereafter to be mentioned.

The general names by which the natives of Greece were known to old historians, were Graioi, Hellenists, Achæi, Pelasgi. But the most ancient name of all applied to this country, is generally admitted to be that of Ionia, which the Greeks derive from Ion; but Josephus derives it from Javan the son of Japheth.

The several states, except Argos and Sicyon, which at length constituted Greece, had at this time, no separate existence. They sprang up afterwards, during the latter part of the present period, as there will now be occasion to mention. In Argos, the descendants of Inachus, having retained possession of the throne for more than 300 years, were deposed, 1511 years B. C., by Danaus, an Egyptian fugitive, who became the founder of a second dynasty, denominated Belidæ, from his father, Belus. At a much later period, Perseus, a sovereign of Argos, having built Mycenæ, transferred the kingdom thither. It was at length conquered by the Heraclidæ, and united to Lacedæmon. It may be here noticed, that only two of the Grecian states, viz. Lacedæmon and Messenia, appear to have been founded by native Greeks; the rest were established by the various branches of the Celtic family of Uranus, with the exception of Athens, which owed its origin to an Egyptian. Prior to these establishments, and even long after them, almost every village had its petty tyrant, who bore the title of king. A name has occasionally escaped oblivion. Laws we do not find among them, before the times of the Athenian archons. Until that period, all depended on the will of the sovereigns; only in perplexed cases, they consulted some oracle, of which the two most celebrated were, that of Jupiter at Dodona, and that of Apollo at Delphi.

Cecrops, a native of Egypt, is universally allowed to have founded Athens, 1556 years B. C. At this time he arrived in Attica, with a colony of his countrymen, and built twelve small villages or cities, of which Athens was one. He gave laws to the wild inhabitants, whom he divided into twelve tribes, and instituted marriage among them. The first altar in Greece was raised by him to Jupiter.

The successor of Cecrops was Cranaus. In this time happened the famous deluge of Deucalion, in Thessaly. The third king of Athens was Amphictyon, who founded the celebrated Amphictyonic Council.

The deluge of Deucalion owed much of its importance to the imaginations of the poets. It was probably only a partial inundation. In the reign of Amphictyon, a famine occurred, during which Ericthonius, said to be the son of Vulcan, arrived from Egypt with a supply of corn, and taught the natives the art of agriculture, for which he was raised to the throne in the room of Amphictyon.

Corinth, another of the Grecian states, was founded 1520 years B. C., but did not receive the name of Corinth till it was rebuilt, 1410 years B. C. It originally formed a part of the kingdom of Sicyon, and was afterwards included in that of Argos, till Sysyphus, some time in the following period, seized it for his possession. Thebes, a state of Greece also, was founded by Cadmus. The city, though begun by him, was finished by Amphion and Zethus. He introduced letters into Greece, 1519 years B. C. Thebes he built a few years afterwards. Cadmus is supposed to have been of Phœnician extraction. To him are ascribed 16 letters of the Greek alphabet. He thus essentially contributed to the literary distinction which Greece afterwards attained. Lacedæmon, or Sparta, another distinguished state of Greece, was founded by Lelex, 1516 years B. C., but received its name from Lacedæmon, its fourth king. The government continued in the family of Lelex till the return of the Heraclidæ to the Peloponnesus, an event to be noticed in the coming period. Sparta was called after the name of the wife of Lacedæmon, the great grand-daughter of Lelex. Sparta properly belongs to the metropolis—Lacedæmon to the kingdom at large. The Peloponnesus, in which Lacedæmon was situated, was the southern part of Greece. [World Displayed.]

MYTHOLOGY.

SALUS.

"The goddess Salus was so much honoured by the Romans, that anciently several holy days were appointed in which they worshipped her. There was a gate at Rome called Porta Salutaris, because it was near to the temple of Salus. The Augurium Salutis was formerly celebrated in the same place. It was a kind of divination, by which they begged leave of the gods that the people might pray for peace.

FIDELITY.

"Fidelity, says St. Augustin, had her temple and altar, and sacrifices were performed to her. They represented her like a venerable matron sitting upon a throne, holding a white rod in her right hand, and a great horn of plenty in her left.

UNDERSTANDING.

"Good Sense, or Understanding, (*Mens*,) was made a goddess by the Romans, that they might obtain a sound mind. An altar was built to her in the capitol, by M. Æmilius. The prætor Attilius vowed to build a chapel to her; which he performed when he was created duumvir.

LIBERTY.

"As the Romans were, above all things, careful of their liberty, especially after the expulsion of the kings, when they set themselves at liberty, so they built a temple to Liberty, among the number of their other goddesses.

PECUNIA.

"The Romans invoked Pecunia as a goddess, that they might be rich. They worshipped the god Æsculanus, the father of Argentinus, that they might have plenty of brass and silver; and esteemed Æsculanus, the father of Argentinus, because brass money was used before silver. 'I wonder,' says St. Augustin, 'that Aurinus was not made a god after Argentinus, because silver money was followed by gold.' To this goddess, Money, O how many apply their devotions to this day! what vows do they make, and at what altars do they importune, that they may fill their coffers! 'If they have those gods,' says Meander, 'gold and silver at home, ask whatever you please, you shall have it, the very gods themselves will be at your service.'

RISUS.

"Lycurgus ridiculously erected an image, among the Lacedæmonians, to the God Risus. The Thessalonians, of the city of Hypata, every year sacrificed to this god with great jollity.

BONUS GENIUS.

"The god Bonus Genius had a temple in the way that leads to the mountain Mænalus, as says Pausanias. At the end of the supper, they offered a cup to him, filled with wine and water; which was called 'The grace cup.' Some say the cup had more water than wine; others say the contrary.

FAME.

"Pausanias and Plutarch say, that there were temples dedicated to Fame. She is thus finely and delicately described by Virgil.

Fame, the great ill. from small beginning grows,
Swift from the first, and every moment brings
New vigour to her flights, new pinions to her wings.
Soon grows the pigmy to gigantic size,
Her feet on earth, her forehead in the skies.
Enrag'd against the gods, revengeful Earth
Produc'd her last of the Titanian birth.
Swift is her walk, more swift her winged haste,
A monstrous phantom, horrible and vast:
As many plumes as raise her lofty flight,
So many piercing eyes enlarge her sight;
Millions of op'ning mouths to Fame belong,
And every mouth is furnished with a tongue;
And round with list'ning ears the flying plague is hung,
She fills the peaceful universe with cries;
No slumbers ever close her wakeful eyes;
By day from lofty tow'rs her head she shows,
And spreads through trembling crowds disastrous news.
With court-informers' haunts, and royal spies,
Things done relates, not done she feigns, and mingles truth
with lies:
Talk is her business, and her chief delight
To tell of prodigies, and cause affright.

THE INFERNAL REGIONS.

"Deep was the cave, and downward as it went
From the wide mouth, a rocky, rough descent;
And here the access a gloomy grove defends;
And there the unnavigable lake extends,
O'er whose unhappy waters, void of light,
No bird presumes to steer his airy flight,
Such deadly stenches from the depth arise,
And steaming sulphur, which infects the skies;
Hence do the Grecian bards their legends make,
And give the name Avernus to the lake."

"The passage that leads to these infernal dominions was a wide, dark cave, through which you pass by a steep, rocky descent' till you arrive at a gloomy grove, and an unnavigable lake, called Avernus, from which such poisonous vapours arise, that no birds can fly over it; for in their flight they fall down dead.

"The monsters at the entrance of hell are those fatal evils which bring destruction and death upon mankind, by means of which the inhabitants of these dark regions are greatly augmented; and those evils are care, sorrow, diseases, old age, frights, famine, want, labour, sleep, death, sting of conscience, force, fraud, strife, and war.

"Just in the gate, and in the jaws of Hell,
Revengeful Care and sullen Sorrow dwell;
And pale Diseases, and repining Age,
Want, Fear, and Famine's unresisted rage:
Here Toil and Death, and Death's half brother, Sleep,
(Forms terrible to view,) their sentry keep.
With anxious Pleasures of the guilty mind,
Deep Fraud before, and open Force behind;
The Furies' iron beds, and Strife that shakes
Her hissing tresses, and unfolds her snakes."

CHARON.

"Charon is an old, decrepid, long-bearded fellow: he is the ferryman of hell; his name denotes the ungracefulness of his aspect. In the Greek language he is called *Porthmeus*, that is "ferryman." The following beautiful and elegant picture of him is drawn by the pen of Virgil.

There Charon stands, who rules the dreary coasts;
A sordid god; down from his hoary chin
A length of beard descends, uncomb'd, unclean;
His eyes like hollow furnaces on fire;
A girdle foul with grease binds his obscene attire.
He spreads his canvass, with his pole he steers;
The frights of flitting ghosts in his thin bottom bears.
He look'd in years, yet in his years were seen
A youthful vigour, and autumnal green.

"He is waiting to take and carry over to the other side of the lake the souls of the dead, which are flocking on the shores in troops. Yet he takes not all promiscuously who come, but such only whose bodies are buried when they die; for the unburied wander about the shores a hundred years, and then are carried over.

A hundred years they wander on the shore,
At length, their penance done, are wafted o'er.

"But first they pay Charon his fare, which is at least a halfpenny.

"There are three or four rivers to be passed by the dead. The first is Acheron, which receives them when they come first. This Acheron was the son of Terra or Ceres, born in a cave, and conceived without a father; and because he could not endure light, he ran down into hell and was changed into a river whose waters are extremely bitter.

"The second is Styx, which is a lake rather than a river, and was formerly the daughter of Oceanus, and the mother of the goddess Victoria by Acheron. When Victoria was on Jupiter's side in his war against the Giants, she obtained this prerogative for her mother, that no oath that was sworn among the gods by her name should ever be violated: for if any of the gods broke an oath sworn by Styx, they were banished from the nectar and the table of the gods a year and nine days. This is the Stygian Lake, by which, when the gods swore, they observed their oath with the utmost scrupulousness.

"The sacred stream which heaven's imperial state
Attests in oaths, and fears to violate.

"The third river, Cocytus, flows out of Styx with a lamentable, groaning noise, and imitates the howling and increases the exclamations of the damned.

"Next comes Phlegethon, or Puriphlegeton, so called because it swells with waves of fire, and all its streams are flames.

"When the souls of the dead have passed over these four rivers, they are afterwards carried to the palace of Pluto, where the gate is guarded by Cerberus, a dog with three heads, whose body is covered in a terrible manner with snakes instead of hair. This dog is the porter of hell, begotten of Echidna, by the giant Typhon, and is described by Virgil and by Horace.

Stretch'd in his kennel, monstrous Cerberus round
From triple jaws made all these realms resound.
Hell's grisly porter let you pass,
And frown'd and listen'd to your lays;
The snakes around his head grew tame,
His jaws no longer glow'd with flame,
Nor triple tongue was stain'd with blood;
No more his breath with venom flow'd."

MUTUAL INSTRUCTION.

The following account of a Literary Society, the members of which belong to the working class, is condensed from a paper addressed to the proprietors of large manufactories by the Secretary of the Glasgow Chamber of Commerce.

It is justly remarked by this gentleman that the mere acquisitions of reading and writing only serve to open the door to knowledge; and, unless we are induced to pass the portal, the stores which lie within will still remain useless to us. No efforts, however assiduous, for acquiring intellectual treasures in the exercise of our mental powers, can be so successful or satisfactory as where men unite together to grapple with ignorance, and mutually to instruct each other. The formation of societies for this purpose cannot be too strongly recommended. An account of such an institution formed in Glasgow for the improvement of a single body of workmen will strongly illustrate these remarks.

The Gas Light Chartered Company of that city constantly employs between sixty and seventy men in the works; twelve of these are mechanics, and the others furnace-men and common labourers of different descriptions.

In 1821, the manager of the works proposed to these men to contribute each a small sum monthly, to be laid out in books to form a library for their common use. He informed them that if they agreed to this, the Company would give them a room to keep their books in, which should be heated and lighted for them in winter; that in this room they might meet every evening throughout the whole year to read and converse, in place of going to the alehouse, as many of them had been in the practice of doing; that the Company would further give them a present of five guineas to expend on books; and that the management of every thing connected with the measure should be intrusted to a committee of themselves, to be named and renewed by them at fixed periods. Fourteen of the workmen were induced to agree to the plan. A commencement was thus made. For the first two years, until it could be ascertained that the members would take proper care of the books, it was agreed that they should not remove them from the reading-room, but that they should meet there every evening to peruse them. After this period, however, the members were allowed to take the books home; and they then met only twice a week at the reading-room, to change them, and converse upon what they had been reading. The increase of the number of the subscribers to the library was at first very slow, and at the end of the second year the whole did not amount to thirty. But from conversing twice a week with one another at the library upon the acquisitions they had been making, a taste for science and a desire for information began to spread among them. They had, a little before this time, obtained an atlas, which, they say, led them to think of a pair of globes. One of their members, by trade a joiner, who had the advantage of attending two courses of lectures in the Andersonian Institution, volunteered, on the third year after the formation of the society to explain to its members the use of the globes. This he did one evening in every week, and succeeded so well that he offered on the other meeting in the week to give an account of some of the principles and processes in mechanics and chymistry, accompanied with a few experiments. He next, and while he was still going on with his lectures, undertook, along with another of the workmen, to attend in the reading-room during the other evenings of a week, and teach arithmetic to such of the members as chose. The society now made very rapid progress, and its members were induced to make a new arrangement by which the labour of instructing was more equally divided.

The individuals of the committee agreed among themselves to give in rotation a lecture on chymistry or mechanics every Thursday evening, taking Murray for their text-book in the one, and Ferguson in the other. The plan is still pursued. It is intimated a fortnight before to the person whose turn it is, that he is to lecture from such a page to such a page of one of these authors. He has these fourteen days to make himself acquainted with the subject; and he is authorized to claim, during that period, the assistance of every member of the society in preparing the chymical experiments, or making the little models of machines for illustrating his discourse.

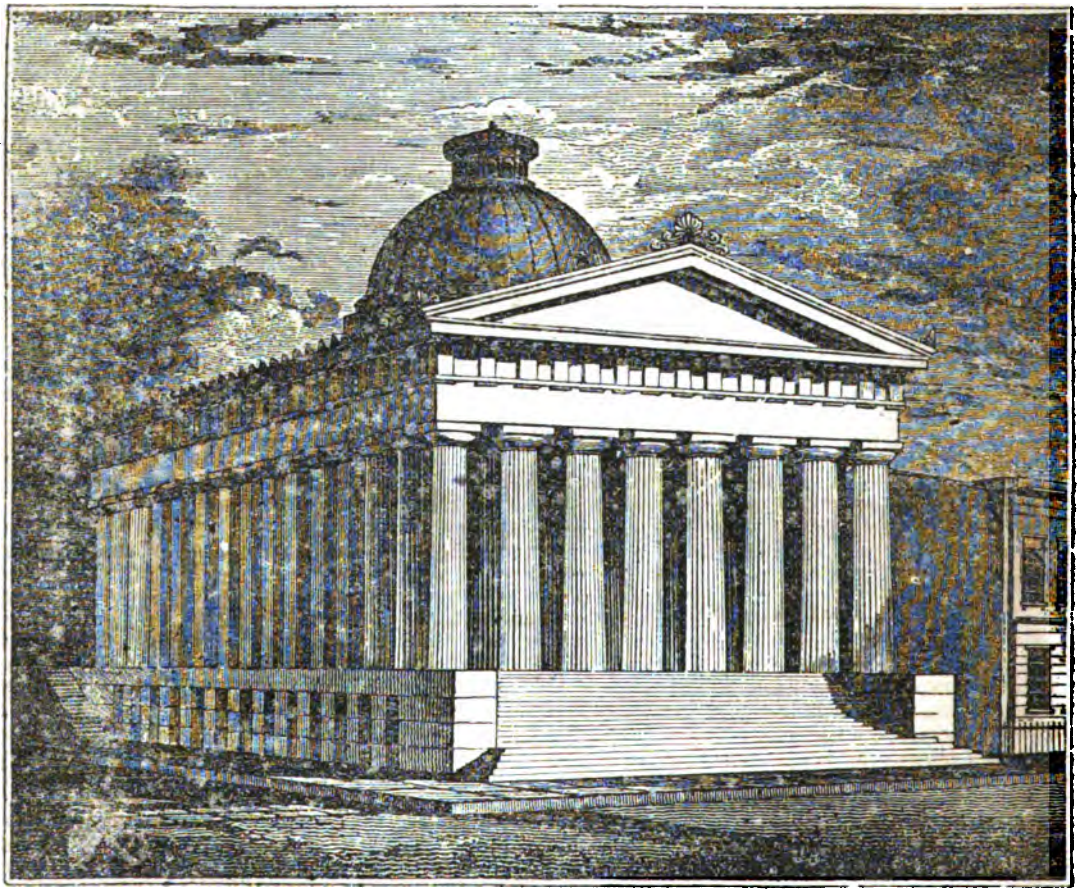
It is a remarkable circumstance in this unique process of instruction, that there has been no backwardness found on the part of any of the individuals to undertake to lecture in his turn, nor the slightest diffidence exhibited in the execution. This is attributed, solely to its being set about without pretension or affectation of knowledge, and merely as a means of mutual improvement.

On the Monday evenings the society has a voluntary lecture from any one of its members who chooses to give notice of his intention, on either of the branches of science already mentioned, or upon any other useful subject he may propose. And there is with the general body the same simple unhesitating frankness, and disposition to come forward in their turn, that exist among the members of the committee with regard to the lectures prescribed to them. It may be interesting as well as useful to mention some of the subjects of the different lectures that were given during the first three months after this plan was adopted. Those delivered by the members of the committee consisted of eleven on mechanics, including the application of the mechanical powers; one on magnetism and electricity; one on wheel-carriages; one on the primitive form of crystals; and one on hydrostatics. The voluntary lectures treated on the air-pump, chymistry, &c. besides many practical subjects, such as boring and mining, Sir Humphrey Davy's lamp, the construction of a corn-mill, and a description of Captain Manby's invention for the preservation of shipwrecked seamen.

The effect of this society was soon found to be most beneficial to the general character and happiness of the individuals composing it. It may readily be conceived what a valuable part of the community the whole of our manufacturing operatives might become if the people employed in every large work were enabled to adopt similar measures. What might we not then be entitled to look for, in useful inventions and discoveries, from minds awakened and invigorated by the self discipline which such a mode of instruction requires.

The Gas Company being fully aware of the beneficial consequences resulting from the instruction of their work-people, fitted up for their use, in the latter end of 1824, a more commodious room for their meetings, with a small laboratory and workshop attached to it, where the experiments are conducted, and the models to be used in the lectures are prepared. Previously to this time the men had made for themselves an air-pump and an electrifying machine, and some of them are constantly engaged in the laboratory and workshop during their spare hours. At the end of three years from its commencement the whole of the workmen, with the exception of about fifteen became members of the society, and these were withheld from joining in consequence of their inability to read. The others said to them, "Join us and we will teach you to read." It is gratifying to know that this invitation has not been made in vain; and that at the present time this association, now amounting to upwards of seventy persons, comprehended nearly all those employed about the works.

The Rules of the society, which have been framed by the members themselves, are simple and judicious. Every person on becoming a member pays seven shillings and sixpence of entrance money. This sum is taken from him by instalments, and is paid back to him should he leave the gas works, or to his family or heirs should he die. Besides this entrance money, each member contributes three halfpence weekly, two-thirds of which go to the library, and one-third to the use of the laboratory and workshop. The weekly lectures are continued during the winter months, and the members are permitted to bring to these any of their sons who are above seven and under twenty-one years of age. Additions have from time to time been made to the chymical and mechanical apparatus, and the library now contains seven hundred volumes.



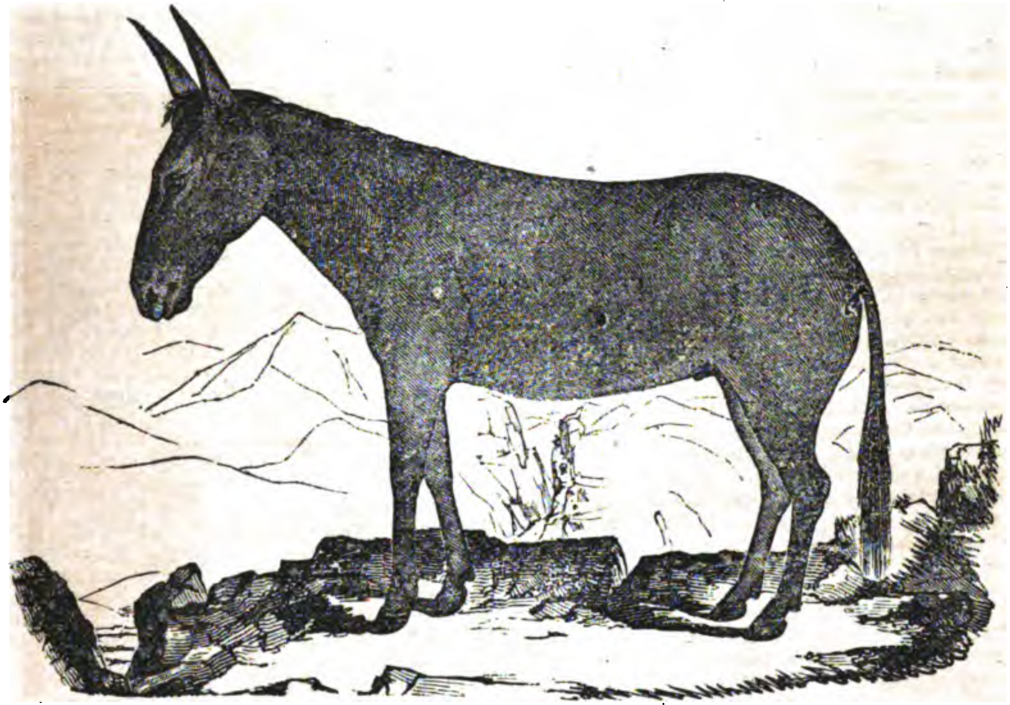
NEW YORK CUSTOM HOUSE

A New Custom House is now erecting on the site of the old one, at the corner of Wall and Nassau streets, extending to Pine street. The following is a description of the contemplated building.

The building is to be 177 feet long, and 89 feet wide; and the form and order of the building to be similar to that of the Parthenon at Athens. It is to stand on a basement story, ascended by nineteen steps from Wall street, and six steps on Pine street. There are to be eight Grecian Doric columns at each front, and fifteen columns and antæ on each side attached to the walls.—There is also to be a second row of six smaller columns back of and parallel with those of the main front, leaving a space of ten feet between the two rows; and nine feet between the inner row and the front wall of the building. Back of the two extreme columns of the inner row there are to be two antæ, and six antæ attached to the walls of the rear front, leaving a space of eight feet and a half between the columns and antæ. There will thus be twenty-four outside columns, five feet eight inches diameter at the bottom, and thirty-two feet high, including the capital, and eighteen antæ on the two sides of the same height, five feet wide, and three feet nine inches projections from the walls. The six inner columns of the main front will be four feet eight inches diameter at bottom, and the antæ to correspond. The building is to be two stories high, except the great business hall, part of which is to be vaulted as high as the roof will permit, and its centre finished with a dome sixty-two feet in diameter.—This hall will occupy the centre of the building, and will be one hundred and fifteen feet long, leaving a small vestibule at each end to enter from. It is to be seventy-seven feet wide in the *centre part*, which is a circle of seventy feet diameter, with the length and breadth of the room extending beyond its circumference to these dimensions; and the four parts so extended beyond the circle are thirty-three and a half feet wide, leaving six rooms and three circular staircases in the four corners, the two largest rooms to be twenty-four by twenty-one feet each, besides a square staircase in the rear, and three vaults for papers at the two ends of each vestibule. The same division of room is made in the second story. Nearly the same number, shape, and sizes of rooms are had in the basement, as above in the other stories, leaving all the area of the same shape and size as the great hall immediately about it; with the addition of sixteen fluted doric columns to support the vaulting and the pavement under the dome of the great hall.

[New York as it is.]

NATURAL HISTORY.



THE MULE.

"The Mule is an intermediate creature, springing from the union of the male ass with the mare, or of the horse with the female ass (the former being the best;) and it accordingly inherits the small legs and handsome shape of the horse, and the long ears and cross on the back, which characterize its more humble parent. In obstinacy it surpasses the latter; but it is valuable for its sureness of foot, which enables it to pass with safety along the most tremendous precipices, if left to the guidance of its own instinct. The Mule is fond of handsome trappings, and is longer lived than either the horse or the ass. Nature denies it the power of continuing its race. In one or two instances, however, an exception has occurred to this rule."

The above engraving is taken from a Mule often seen in the ice cart of Mr. Wortendyke of this city.

EDUCATION.

ON THE POLICY OF ELEVATING THE STANDARD OF FEMALE EDUCATION.

Addressed to the American Lyceum, May, 1834.

The importance of education seems now to be universally admitted. It has become the favourite subject of some of the wisest and most gifted minds. It has incorporated itself with the spirit of our vigorous and advancing nation. It is happily defined by one of the most elegant of our living writers,—as the '*mind of the present age, acting upon the mind of the next.*' It will be readily perceived how far this machine surpasses the boasted lever of Archimedes,—since it undertakes not simply the movement of a mass of matter, the lifting of a dead planet from its place, that it might fall, perchance, into the sun and be annihilated, —but the elevation of that part of man whose power is boundless,—and whose progress is eternal,—the raising of a race, 'made but so little lower than the angels,' to a more entire assimilation with superior natures.

In the benefits of an improved system of Education, the female sex are now permitted liberally to participate. The doors of the temple of knowledge, so long barred against them, have been thrown open. They are invited to advance beyond its threshold.—The Moslem interdict that guarded its hidden recesses is removed. The darkness of a long reign of barbarism, and the illusions of an age of chivalry, alike vanish,—and the circle of the sciences, like the shades of Eden, gladly welcome a new guest.

While gratitude to the liberality of this great and free nation is eminently due from the feebler sex, they have still a boon to request. They ask it as those already deeply indebted, yet conscious of ability to make a more ample gift profitable to the *giver* as well as the *receiver.* It seems desirable that their education should combine more thoroughness and solidity, that it should be expanded over a wider space of time, and that the depth of its foundation should bear better proportion to the height and elegance of its superstructure. Their training ought not to be for display and admiration, to sparkle amid the froth and foam of life, and to become enervated by that indolence and luxury, which are subversive of the health, even the existence of a republic. They should be qualified to act as teachers of knowledge, and of goodness. However high their station, this office is no derogation from its dignity,—and its duties should commence whenever they find themselves in contact with those who need instruction.—The adoption of the motto, that *to teach is their province,* will inspire diligence to the acquisition of knowledge, and perseverance in the beautiful mechanism of pure example.

It is requisite that they who have in reality, the *moulding of the whole mass of mind, in its first formation,* should be profoundly acquainted with the structure and capacities of that mind; that they who nurture the young citizens of a prosperous republic, should be able to demonstrate to them, from the broad annals of History, the blessings which they inherit, and the wisdom of preserving them, the value of just laws, and the duty of obeying them. It is indispensable that they on whose bosom the infant heart is laid, like a germ in the quickening breast of spring, should be vigilant to watch its first unfoldings, and to direct its earliest tendrils where to twine. It is unspeakably important, that they who are commissioned to light the lamp of the soul, should know how to feed it with pure oil; that they in whose hand is intrusted the welfare of a being never to die, should be able to perform the work, and earn the wages of Heaven.

Assuming the position that *females are by nature designated as teachers,* and that the mind in its most plastic state is their pupil, it becomes a serious inquiry, *what they will be likely to teach.* They will of course, impart what they best understand, and what they most value. They will impress their own peculiar lineaments upon the next generation. If vanity and folly are their predominant features, posterity must bear the likeness. If utility and wisdom are the objects of their choice, society will reap the benefit. This influence is most palpably operative in a government like our own. Here the intelligence and virtue of every individual possesses a heightened relative value.—The secret springs of its harmony may be touched by those whose birth-place was in obscurity. Its safety is interwoven with the welfare of all its subjects.

If the character of those to whom the charge of schools is committed has been deemed not unworthy the attention of law-givers, is not her education of consequence, who begins her labour before any other instructer, who pre-occupies the unwritten page of being, who produces impressions which nothing on earth can efface, and stamps on the cradle what will exist beyond the grave, and be legible in eternity?

The ancient republics overlooked the worth of that half of the human race which bore the mark of physical infirmity. Greece, so exquisitely susceptible to the principle of beauty, so skilled in wielding all the elements of grace, failed to appreciate the latent excellence of woman. If, in the brief season of youth and bloom, she was fain to admire her as the acanthus-leaf of her own Corinthian capital, she did not discover, that like that very column, she might have added stability to the temple of freedom. She would not believe that her virtues might have aided in consolidating the fabric which philosophy embellished and luxury overthrew.

Rome, notwithstanding her primeval rudeness, and the ferocity of her wolf-nurs'd greatness, seems more correctly than polished Greece, to have estimated the 'weaker vessel.' Here and there, upon the storm driven billows of her history, the form of woman is distinctly visible, and the mother Gracchi still stands forth in strong relief, amid that imagery, over which time has no power. Yet where the brute force of the warrior was counted godlike, the feebler sex were prized, only in their approximation to the energy of a sterner nature, as clay was held in combination with iron, in the feet of that mysterious image which troubled the visions of the Assyrian king.

To some of the republics of South America, the first dawn of liberty gave a light which Greece and Rome, so long her favoured votaries, never beheld. Even in the birth of their political existence, they discovered that the sex whose *strength is in the heart,* might exert an agency in modifying national character. New Grenada set an example which the world had not before seen. Ere the convulsive struggles of revolution had subsided, she unbound the cloistered foot of woman, and urged her to ascend the heights of knowledge. She established a college for females, and gave its superintendence to a lady of talent and erudition. We look with solicitude toward the result of this experiment. We hope that our sisters of the 'cloud-crowned Andes,' may be enabled to secure and to diffuse the blessings of education, and that from their abodes of domestic privacy, a hallowed influence may go forth, which shall aid in reducing a chaos of conflicting elements to order, and symmetry, and permanent repose.

In our own country, man, invested by his maker with the 'right to reign, has nobly conceded to her, who was for ages a vassal, equality of intercourse, participation in knowledge, guardianship over his dearest possessions, and his fondest hopes. He is content to 'bear the burden and heat of the day,' that she may dwell in plenty and at ease. Yet from the very felicity of her lot, dangers arise. She is tempted to rest in superficial attainments, to yield to that indolence which spreads like rust over the intellect, and to merge the sense of her own responsibilities in the slumber of a luxurious life. These tendencies should be neutralized by an education of utility, rather than of ornament. Sloth and luxury, the subverters of republics, should be banished from her vocabulary. It is expedient that she be surrounded in youth with every motive to persevering industry, and severe application; and that in maturity she be induced to consider herself an ally in the cares of life, especially in the holy labour of rearing the immortal mind. While her partner stands on the high places of the earth, toiling for his stormy portion of that power or glory from which it is her privilege to be sheltered, let her feel that to her, in the recesses of the domestic sphere, is intrusted the culture of that knowledge and virtue, which are the strength of a nation. Happily secluded from lofty legislation and bold enterprise, with which her native construction has no affinity; she is still accountable to the government by which she is protected, for the character of those who shall hereafter obtain its honours, and control its functions.

Her place is in the quiet shade, to watch the little fountain, ere it has breathed a murmur. But the fountain will break forth into a stream, and the swelling rivulet rush toward the sea; and she, who was first at the fountain head, and lingered longest near the infant streamlet, might best guide it to right channels; or, if its waters flow complaining and turpid, could truest tell what had troubled their source.

Let the age which has so freely imparted to woman the treasures of knowledge, add yet to its bounty, by inciting her to gather them with an unremitting and tireless hand, and by expecting of her the highest excellence of which her nature is capable. Demand it as a debt—Summon her to abandon inglorious ease.—Arouse her to practise and to enforce those virtues, which sustain the simplicity, and promote the permanance of a great republic. Make her answerable for the character of the next generation.—Give her this solemn charge in the presence of 'men and of angels,' —gird her to its fulfilment with the whole armour of education and piety, and see if she be not faithful to her offspring, to her country, and to her God!

L. H. S.

CHARACTER OF WASHINGTON.

No matter what may be the birthplace of such a man as Washington. No climate can claim, no country can appropriate him; the boon of Providence to the human race: his fame is eternity; his residence creation. Though it was the defeat of our arms, and the disgrace of our policy, I almost bless the convulsion in which he had his origin: if the heavens thundered and the earth rocked, yet, when the storm passed, how pure was the climate that it cleared; how bright in the brow of the firmament was the planet it revealed to us! In the production of Washington, it does really appear as if nature was endeavouring to improve on herself, and that all the virtues of the ancient world were but so many studies preparatory to the patriot of the new. Individual instances, no doubt, there were; splendid exemplifications of some single qualifications: Cesar was merciful; Scipio was continent; Hannibal was patient; but it was reserved for Washington to blend them all in one, and like the lovely master-piece of the Grecian artist, to exhibit in one glow of associated beauty, the pride of every model, and the perfection of every master.

As a general he marshalled the peasant into a veteran, and supplied by discipline the absence of experience. As a statesman, he enlarged the policy of the cabinet into the most comprehensive system of general advantage; and such was the wisdom of his views, and the philosophy of his counsels, that to the soldier and the statesman, he almost added the character of the sage. A conqueror, he was untainted with the crime of blood; a revolutionist, he was free from any stain of treason; for aggression commenced the contest, and a country called him to the command; liberty unsheathed his sword; necessity stained, victory returned it. If he had paused here, history might doubt what station to assign him; whether at the head of her citizens or her soldiers, her heroes or her patriots. But the last glorious act crowned his career, and banishes hesitation. Who, like Washington, after having freed a country, resigned her crown, and retired to a cottage rather than reign in a capitol. Immortal man! He took from the battle its crime, and from the conquest its chains: he left the victorious the glory of his self-denial, and turned upon the vanquished only the retribution of his mercy. Happy, proud America! The lightnings of heaven yielded to your philosophy! The temptations of earth could not seduce your patriotism!

Phillips.

CONSTANTINOPLE IN 1831.

From the Journal of an Officer.

The changes effected both in the dress and manners of the inhabitants at Constantinople, and in the style of the city itself, since I last visited it in 1818, were to me most surprising and unexpected. Certainly the greatest portion of the imposing appearance of the Turks is the recent reform in their costume, which formerly was rich, elegant and varied: but under this present Frank or European garb, they have become an ill-dressed, slovenly, nay, in most cases, a ridiculously mean-looking race. The crimson stuffed cap, surmounted by a blue spread tassel, descends low on the eye-brows, and how deeply must its enemies sigh after the proud and fanciful turban! The younger and less respectable Turks who have adopted the new costume, put on short round jackets with upright collars buttoned to the chin, and, according to the season, wear very loose calico or woollen Cossac trousers. The older and more respectable classes make use of long surtout coats, with stiff, straight collars; waistcoats, loose trousers and the black shoes, complete the dress; and sometimes a dirty white neckcloth is tied uncomfortably about their throats. To conceal, however, this cruel abolition of a beautiful national dress, a military cloth cloak is worn by the Effendis, which conceals the horrors of their present habiliments. So altered are the gentry of the new costume, that I should say their next step would be to turn Christians. The European dress was never intended for a Mohammedan, or even an Asiatic.

It is astonishing the effect dress has on the human race. Thus the Turks became more dignified and slothful than by nature they were intended to have been, because they could neither manage on foot the arrangement of their heap of clothes, nor walk with comfort in their slippers. Since the tails of their coats have been clipped, certainly they move about with more activity. The sword is more rapid in the work of conversion than the tongue. The Sultan uses the former weapon without any remorse; and it must be confessed after all that the Turks are a dastardly people, easily intimidated, submissive and cringing.

This has become apparent since the destruction of the Janissaries. Military costume is the fashionable dress of the day; whilst all copying from the Sultan, wear their beards of the same length as his, and pull their caps equally low over their foreheads. The national colour for the army is blue. I never saw a better behaved body of men than the new troops, trained and regimented on the European principle; they are always ready to give assistance to foreigners when required.

The city of Constantinople is much improved by being kept very clean, by the erection of new bazaars, by the embellishment of the old ones, and by the guardianship of a very vigilant police. The streets are now free from all rubbish and offensive objects; no notice is taken of foreigners; and even European females without the slightest change of costume, may walk through every part unmolested and almost unobserved.

Last Friday we went to see the Sultan on his weekly visit to a mosque, to hear divine service. It was on the Pera side of the Bosphorus. About five thousand infantry, with a powerful band, were drawn out in one line from the entrance of the place of worship, to receive him. They must have been a part of the select corps, since the men were very well dressed, and remarkably good looking, stout, and tall. They handled their arms well, and were steady. We were placed under the veranda of a coffee house, close to which the Sultan passed. His Majesty was preceded by six led horses, saddled and bridled in the European manner, with richly embroidered shabrack; then came double files of mounted pages, dressed in various coloured jackets, and white trousers, officers of the household, adies-de-camp, and other military attendants; and lastly, the favourite Meer Allace, or General of the Guards, Hoosain Pacha. To these succeeded the Sultan, immediately followed by a personal guard of infantry, composed of remarkably fine young men. He wore the scarlet Military cap, embroidered round the sides, and surmounted by a rich gold tassel, the long bullion of which hung like a fringe over its crown. A cloak of sky blue cloth with straight embroidered collar almost concealed his under dress, a light cloth jacket, buttoned close up to the chin, his gold-laced white kerseymere trousers, and boots with spurs. On his left breast shone a beautiful diamond star. His sabre and belt were European, as also his saddle and bridle. For a moment I could scarcely place faith in my sight, so changed was this haughty monarch "of the sea and earth" from what I had seen of him some years back, moving in the full awfulness of Asiatic majesty. The waving plumes of a multitude of shattars, or running footmen, then screened him from the gaze of his subjects; he was borne on by his horse at a movement almost motionless, his eyes were fixed, countenance pale, gloomy, and most melancholy; and now I beheld the same powerful sovereign decked out in a flippant uniform, very similar to that of a light cavalry officer, with florid complexion, active, inquisitive gaze, and beard almost clipt to the chin. I must say, Sultan Mahmood seemed to enjoy his emancipation from all the thraldoms of pomp and ceremony. In about half an hour the Sultan returned, and every part of the procession was managed without the slightest noise or confusion. Though, I imagine, the Sultan must have moments of great uneasiness, regarding his personal safety he does not hesitate to move amongst the crowded streets, or apparently shun occasions when attempts might be made on his life.

Persons who by a long sojourn in Constantinople have acquired a considerable and more than superficial knowledge of Turkish affairs, assert that the late changes and ameliorations, instead of retarding, will accelerate the downfall of the Ottoman Government. The spirit of the people has been broken, and both national and religious feeling humbled and outraged. It is an arduous undertaking for a monarch endowed even with great wisdom and resolution to reform a nation, particularly a nation professing the Mohammedan faith; yet I should say, that such has apparently been effected in Constantinople; and, judging superficially, we would deem it the capital of a prosperous and vigorous government. The public buildings are undergoing general repair, old edifices are removing to be erected anew, and every where there is a stir denoting activity. Yet these signs of improvements are only observable in Constantinople, whilst the provinces are oppressed, misruled and absolutely defenceless. If the system pursued by the Sultan does not produce the results anticipated by many even to the regeneration of his people, certainly the body of the nation has been relieved from the insolence and lawless habits of the Janissaries; and those predatory bands of horsemen, the Dehlees and Hytees, no longer pillage the country. Criminals are now with facility seized and punished, and for years the Turkish empire has not been so tranquil, or so secure to foreigners, travellers, or merchants.—*United Service Journal.*

ANCIENT BURYING GROUND.

The following account respecting several ancient burying grounds, in the State of Tennessee is by the Rev. Mr. Gwinn, an aged and respectable member of the Methodist connexion, and who resides in the section of the country where they are located.

"In the county of White, State of Tennessee, near the town of Sparta, there have been discovered three burying gorunds, where a very small people are deposited in tombs (coffins) of stone. The greatest length of the skeleton is *nineteen inches.*—Some of these people appear to have lived to a great age—their teeth being worn smooth and short, while others are full and long. Many of the tombs (graves) have been opened and the skeletons examined. The graves are about two feet deep; the coffins are of stone, made by laying a flat stone at the bottom, one at each end, and one over the corpse. The dead are all buried with their heads towards the east, and in order, laid on their backs, and their hands on their breasts. In the bend of their left arms is found a cruise or mug, that would hold nearly a pint, made of ground stone or shell of a gray colour, in which is found, one, two or three shells supposed to be sea shells.—One of these skeletons had about the neck 94 pearl beads. There are many of these burying grounds. Near the one which I examined is the appearance of an ancient town. The bones found in these graves are strong and well set, and the whole frame appears to be well formed. These graveyards are in extent an acre and a half.

A PHILOSOPHICAL HOAX.

Judge Breckenbridge, the elder, had a deadly hostility to philosophical societies, against which he waged a war of extermination in the papers, and in the celebrated satirical work, Teague O'Regan. Few persons living knew the cause of his ire, which fell under my observation at the time the provocation was given. In the year 1785 or 1786, he was a candidate for a seat in the legislature of Pennsylvania, for Allegany county. Parties ran high—and he was elected by the constitution party, (the democrats,) under the idea that he would advocate some measures which they had very much at heart; among the rest the reception of a certain species of province money, in payment of arrears due for lands in that country. To the surprise and indignation of his constituents, he not only voted, but made a powerful speech against the last measure. He was then naturally and violently denounced by the democratic party. About this period he became a candidate for membership in the American Philosophical Society, to which his talents gave him a claim superior to that of most, and perhaps nearly equal to that of any, of the members of that body. The "deep damnation" of his vote respecting the province money, was an inexpiable sin in the opinion of the majority of the members, who were ultra democrats; and he was accordingly blackballed. This irritated him highly, and led him to the warfare against the Society, and against all similar institutions. The Judge said that he was wont to delight in hoaxing this Society; and among other tricks which he had played them he narrated the two following. He stole his grandmother's fan, and covered it for a considerable time in a mud puddle. Having disguised it as completely as in his power, he sent it to the Society with an elaborate description to prove that it was the wing of a bat. It was received with due solemnity, and a vote of thanks was passed to the donor. A debate arose as to the species of bat to which it belonged—and a committee of seven was appointed to ascertain whether it was the wing of a Madagascar or Candia bat. The committee sat three weeks, and after consulting Buffon's Natural History and Goldsmith's Animated Nature, they reported that it must have belonged to a Madagascar bat. It was pronounced the greatest curiosity in the Museum, except a large sheet of brown paper which he had hung up in the chimney and disguised with soot and dirt, and palmed upon the Society as part of a Brahmin's shirt.—*M. Carey.*

The Arabians recommended patience by the following proverb: "Be patient, and the mulberry-leaf will become satin."

POETRY.

LINES TO A YOUNG MOTHER.—SPRAGUE.

Young mother! what can feeble friendship say
To sooth the anguish of this mournful day?
They, they alone, whose hearts like thine have bled,
Know how the living sorrow for the dead;
Each tutor'd voice, that seeks such grief to cheer,
Strikes cold upon the weeping parent's ear;
I've felt it all—alas! too well I know
How vain all earthly power to hush thy wo!
God cheer thee, childless mother! 'tis not given,
For man to ward the blow that falls from Heav'n.

I've felt it all—as thou art feeling now;
Like thee, with stricken heart and aching brow,
I've sat and watched by dying beauty's bed,
And burning tears of hopeless anguish shed;
I've gazed upon the sweet, but pallid face,
And vainly tried some comfort there to trace.
I've listened to the short and struggling breath!
I've seen the cherub eye grow dim in death;
Like thee I've veiled my head in speechless gloom,
And laid my first-born in the silent tomb.

SECTION XXIV.

THE SOURCE OF THE MISSISSIPPI.

Mr. Schoolcraft's Narrative of his Exploring Expedition to the heads of the Mississippi has just been published. The following description of his discovery of the extreme source—the very fountains of the great Father of Waters, is graphic and interesting:

"A fog prevented our embarking until five o'clock in the morning, (13th) and it was then impossible to discern the objects at a distance. We found the channel above the Naiwa, diminished to a clever brook, more decidedly marshy in the character of its shores, but not presenting in its plants or trees, any thing particularly to distinguish it from the contiguous lower parts of the stream. The water is still and pondlike. It presents some small areas of wild rice. It appears to be a favourite resort for the duck and teal, who frequently rose up before us, and were aroused again and again by our progress. An hour and a half diligently employed, brought us to the foot of Ossowa Lake. We halted a moment to survey it. It exhibits a broad border of aquatic plants, with somewhat blackish waters. Perch abound in it. It is the recipient of two brooks, and may be regarded as the source of this fork of the Mississippi. We were precisely twenty minutes in passing through it. We entered one of the brooks, the most southerly in position. It possessed no current, and was filled with broad-leaved plants, and a kind of pond-lily.—We appeared to be involved in a morass where it seemed equally impracticable to make the land, or proceed far by water. In this we were not mistaken; Oza Windib soon pushed his canoe into the weeds, and exclaimed, *Oma mikuanna* (here is the portage.) A man who is called upon for the first time to debark in such a place, will look about to discover some dry spot to put his feet upon. No such spot however existed here. We stepped into rather warm pond water, with a miry bottom. After a hundred yards, or more, the soil became firm, and we soon began to ascend a slight elevation, where the growth partakes more of the character of a forest. Traces of a path appeared here, and we suddenly entered an opening affording an eligible spot for landing. Here our baggage was prepared for the portage. The carbonaceous remains of former fires, the bones of birds, and scattered camp poles, proved it to be a spot which had previously been occupied by the Indians. The prevailing growth at this place is spruce, white cedar, tamarack, and gray pine. Here we breakfasted.

"Having followed out this branch of the Mississippi to its source, it may be observed that its existence, as a separate river, has hitherto been unknown in our geography. None of the maps indicate the ultimate separation of the Mississippi, above Cass Lake, into two forks. Little surprise should therefore be manifested that the latitude of the head of this stream is found to be incorrect. It was not, however, to be expected that the inaccuracy would be so great as to place the actual source an entire degree south of the supposed point. Such, however, is the conclusion established by present observations.

"The portage from the east to the west branch of the river, is estimated to be six miles. Beginning in a marsh, it soon rises into a little elevation of white cedar wood, matted with fallen trees, and obscured with moss. From this, the path emerges upon dry ground. It soon ascends an elevation of oceanic sand, having boulders and bearing pines. There is then another descent, and another elevation. In short, the traveller now finds himself crossing a series of diluvial sand ridges, which form the height of land between the Mississippi Valley and Red River. This ridge is locally denominated Hauteur des Terres, where it is crossed in passing from Lac Plaie to Ottertail Lake, from which point it proceeds northward, separating the tributaries of the River des Corbeaus from those of Red River. It finally subtends both branches of the Mississippi, putting out a spur between the east and west fork, which intersects the portage, crosses the west of Itascan fork about the point of the Kakabykonce, or Little Rock Falls, and joining the main ridge, passes north-eastwardly of Lac Travers and Turtle Lake, and is again encountered in the noted portage path from Turtle Lake to Red Lake. It is, in fine, the table land between the waters of Hudson's Bay and the Mexican Gulf. It also gives rise to the remotest tributaries of the River St. Louis, which, through Lake Superior and its connecting chain, may be considered as furnishing the head waters of the St. Lawrence. This table land is probably the highest in North-western America, in this longitude.

"Every step we made in treading these sandy elevations, increased the ardour with which we were carried forward. The desire of reaching the actual source of a stream so celebrated as the Mississippi—a stream which La Salle had reached the mouth of, a century and a half (lacking a year) before, was perhaps predominant; and we followed our guides down the sides of the last elevation, with the expectation of momentarily reaching the goal of our journey. What had been long sought, at last appeared suddenly. On turning out of a thicket into a small weedy opening, the cheering sight of a transparent body of water burst upon our view. *It was Itasca Lake—the source of the Mississippi.*"

Itasca Lake is in every respect a beautiful sheet of water, seven or eight miles in extent, lying among hills of diluvial formation, surrounded with pines which fringe the distant horizon and form an agreeable contrast with the greener foliage of its immediate shores. Its greatest length is from southeast to northwest, with a southern prolongation or bay, which receives a brook. The waters are transparent and bright, and reflect the foliage produced by the elm, lynn, maple, and cherry, together with other species more abundant in northern latitudes. The lake itself is of irregular form, which will be best illustrated by the following sketch: It has a singular island, upon which we landed, after an hour's paddling from the spot of our arrival and embarkation. We found here the forest trees above named growing promiscuously with the betula and spruce. The bones of fish and tortoise, found at the locality of former Indian camp-fires, indicate the existence of these species in the lake. We observed a deer standing in the margin of the lake. And here as well as throughout the lakes of the region, we found the duck, teal and loon in possession of their favourite seclusions. Innumerable shells, (a species of helix,) were driven up to the head of the island. Other parts of the lake yield a small species of the unio, which were found strewing the bed of the outlet. And it may here be remarked that this shell exists, in the largest and heaviest species heretofore known, in the lowest parts of this stream—the Mississippi having its origin here.

The outlet of Itasca Lake is perhaps ten or twelve feet broad, with an apparent depth of from twelve to eighteen inches. The discharge of water appears to be copious compared to its inlet. Springs may however, produce accessions which are not visible, and this is probable, both from the geological character of the country, and the transparency and coolness of the water.

The height of this lake above the sea, is an object of geographical interest, which, in the absence of actual survey, it may subserve the purposes of useful inquiry to estimate. From notes taken on the ascent, it cannot be short of 160 feet above Cass Lake. Adding the estimate of 1330 feet, submitted in 1820, as the elevation of that lake, the Mississippi may be considered to originate at an altitude of say 1500 feet above the Atlantic. Its length, assuming former data as the basis, and computing it through Itascan or west fork, may be placed at 3160 miles—182 of which comprises an estimate of its length above Cass Lake. Its general course in ascending, above the latter point, is north of west as far as the Lac Travers,—then south to its primary fork, which it continued, following up the east fork to Kubbakuana Lake, and for some distance further. It then varies a short distance, north and northwest, then southwest and south, and finally southwest, to its main source in Ossowa Lake.

MYTHOLOGY.

PLUTO.

"Pluto is king of hell, son of Saturn and Ops, and brother of Jupiter and Neptune. He had the infernal dominions allotted to him, not only because in the division of his father's kingdom the western parts fell to his lot, but also, because the invention of burying, and of honouring the dead with funeral obsequies, proceeded from him: for the same reason he is thought to exercise a sovereignty over the dead. Look upon him, he sits on a throne covered with darkness, and discover if you can. his habit, and the ensign of his majesty more narrowly. He holds a key in his hand, instead of a sceptre, and is crowned with ebony.

"Sometimes he is crowned with a diadem; and sometimes with the flowers of *narcissus*, or white daffodils, and sometimes with cypress leaves: because those plants most please him, and especially *narcissus*, since he stole away Proserpine when she gathered that flower. Very often a rod is put into his hand in the place of a sceptre, with which he guides the dead to hell: and sometimes he wears a headpiece, which makes him invisible. His chariot and horses are of a black colour, and when he carried away Proserpine, he rode in his chariot. The key which he holds in his hand signifies that when once the dead are received into his kingdom, the gates are locked against them, and there is no regress thence into this life again.

"His Greek name Plouton or Pluto, as well as his Latin name Dis, signifies wealth. The reason why he is so called, is, because all our wealth comes from the lowest and most inward bowels of the earth; and because, as Cicero observes, all the natural powers and faculties of the earth are under his direction; for all things proceed from the earth, and go thither again. The name *Hades*, by which he is called among the Greeks, signifies dark, gloomy, and melancholy. His name Februus, comes from the old word *februo*, because purifications and lustrations were used at funerals: whence the month of February receives also its appellation: at which time especially, the sacrifices called Februo were offered by the Romans to this god."

PLUTUS.

"Plutus was the son of Jason, or Jasius, by Ceres: he was blind and lame, injudicious, and timorous. And truly these infirmities are justly ascribed to him; for, if he were not blind and injudicious, he would never pass over good men, and heap his treasures upon the bad. He is lame, because great estates come slowly. He is fearful and timorous, because rich men watch their treasure with a great deal of fear and care.

PROSERPINE.

"Proserpine is the queen of Hell, the Infernal Juno, the 'lady,' as the Greeks commonly call her,) and the most beloved wife of Pluto, the daughter of Ceres and Jupiter. She is called both Proserpine and Libera.

"When all the goddesses refused to marry Pluto, because he was so deformed, he was vexed at this contempt and scorn, and troubled that he was forced to live a single life; wherefore in a rage, he seated himself in a chariot, and arose on a sudden from a den in Sicily, where he discovered a company of very beautiful virgins gathering flowers in the sequestered fields of Enna. One of them, Proserpine, pleased him above the rest, for she surpassed them all in beauty. He carried her with him from that place, and on a sudden, sunk into the earth near Syracuse. In the place where he descended a lake arose: and Cicero says, the people of Syracuse keep yearly festivals there, to which great multitudes of both sexes resort.

"The nymphs, her companions, were grievously affrighted, and fled away. In the mean time Ceres, the mother of Proserpine, seeks her daughter among her acquaintance a long time, but in vain. She next kindled torches by the flames which burst out from the top of the mountain Ætna, and went with them, to seek her daughter throughout the whole world; neither did she give over her vain labour, till the nymph Arethusa fully assured her, that Proserpine was stolen by Plutó, and carried down into his kingdom. In great anger, she immediately hastened and expostulated with Jupiter concerning the violence that was offered her daughter; and the god promised to restore Proserpine again, if she had not yet tasted any thing in hell. Ceres went joyfully down, and Proserpine, full of triumph and gladness, prepared to return into this world; but Ascalaphus reflected that he saw Proserpine, while she walked in Pluto's orchard, pluck a pomegranate, and eat some grains of it; therefore her journey was immediately stopped. Ceres being amazed at this new misfortune, and incensed at the fatal discovery of Ascalaphus, turned him into an owl, a bird said to be of an ill omen, and unlucky to all that see it: but at last, by the importunity of her prayers to Jupiter, she extorted this favour from him, that he should permit Proserpine to live half the year at least with her, in heaven, and the other half below in hell, with her husband.

> The goddess now in either empire sways,
> Six months with Ceres, six with Pluto stays.

"Proserpine afterwards loved this disagreeable husband so much, that jealous of Mentha, she changed her into a mint, an herb of her own name.

NOX AND MORS.

"Nox is, of all the gods, the most ancient: she was the sister of Erebus, and the daughter of the first Chaos; and of these two, Nox and Erebus, Mors (*Death*) was born. She is represented as a skeleton, dressed usually with a speckled garment and black wings: but there are no temples, nor sacrifices, nor priests consecrated to Mors; because she is a goddess whom no prayers can move, or sacrifices pacify.

SOMNUS AND MORPHEUS.

"Somnus (*Sleep*) is the brother of Death, and also hath wings, like her. Iris, who was sent by Juno to the palace of this god, mentions the great benefits that he bestows on mankind; such as quiet of mind, tranquillity, freedom from care, and refreshment of the spirits, by which men are enabled to proceed in their labours. In this palace there are two gates, out of which dreams pass and repass: one of these gates was made of clear ivory, through which false dreams pass; the other was made of transparent horn, and through that gate true visions come to men:

Two gates the silent house of sleep adorn:
Of polished iv'ry this, that of transparent horn.
True visions through transparent horn arise;
Through polished iv'ry pass deluding lies.

"Morpheus, the servant of Somnus, who can put on any shape or figure, presents these dreams to those who sleep; he brings them from a great spreading elm in hell, under whose shade they usually sit.

MINOS, RHADAMANTHUS, AND ÆACUS.

"These three are the judges of hell, and are believed to hold council over the souls of the dead, because they exercised the offices of judges in Crete with the greatest prudence, discretion, and justice. The first two were the sons of Jupiter by Europa: the last was the son of Jupiter by Ægina. When all the subjects of queen Ægina were swept away in a plague, beside Æacus, he begged of his father that he would repair the race of mankind, which was almost extinct; Jupiter heard his prayer, and turned a great multitude of ants, which crept about a hollow old oak, into men, who afterward were called Myrmidones, from (*murmex*,) which word signifies an ant.

"These three had their particular province assigned by Pluto in this manner: Rhadamanthus was appointed to judge the Asiatics, and Æacus the Europeans, each holding a staff in his hand; but Minos holds a golden sceptre and sits alone, and oversees the judgments of Rhadamanthus and Æacus; and if in their courts there arose a case that was ambiguous and difficult, then Minos used to take the cognizance thereof, and decide it.

THE MOST FAMOUS OF THE CONDEMNED IN HELL.

TYPHŒUS, OR TYPHON,

"The son of Juno, had no father. So vast was his magnitude that he touched the east with one hand, and the west with the other, and the heavens with the crown of his head. A hundred dragons' heads grew from his shoulders; his body was covered with feathers, scales, rugged hair, and adders; from the ends of his fingers snakes issued, and his two feet had the shape and folds of a serpent's body; his eyes sparkled with fire, and his mouth belched out flames. He was at last overcome, and thrown down; and, lest he should rise again, the whole island of Sicily was laid upon him.

TITYUS

"The son of Jupiter and Elara, was born in a subterraneous cave, in which Jupiter hid his mother, fearing the anger of Juno. She brought forth a child of so prodigious a bulk, that the earth was rent to give him a passage out of the cave; and thence he was believed to be the son of the earth. Juno afterwards persuaded this giant to accuse Latona of criminal conduct: for which Jupiter struck him with thunder down into hell: there he lies, stretched out, covering nine acres of ground with his body; and a vulture continually gnaws his liver, which grows again every month.

PHLEGYAS.

"Phlegyas was the king of the Lipithæ in Thessalia, and the father of the nymph Coronis. When he heard that Apollo had deceived his daughter, he went in anger and fired the temple of Apollo at Delphi: for which the enraged god shot him through the body with an arrow, and inflicted on him the following punishment. A great stone hangs over his head, which he imagines every moment will fall down and crush him to pieces. Thus he sits, perpetually fearing what will never come to pass; which makes him frequently call out to men, to observe the rules of justice and the precepts of religion:

Learn justice hence, and don't despise the gods."

NATURAL HISTORY.

THE ZEBRA.

"The Zebra is the handsomest and most elegantly clothed of all quadrupeds. He has the shape and graces of the horse, the swiftness of the stag, and a striped robe of black and white alternately disposed with so much regularity and symmetry that it seems as if Nature had made use of the rule and compass to paint it. These alternate bands of black and white are so much the more singular, as they are straight, parallel, and very exactly divided, like a striped stuff, and in other parts extend themselves not only over the body, but over the head, the thighs, the legs, and even the ears and the tail; so that, at a distance, this animal appears as if he were surrounded with little fillets, which some person had disposed in a regular manner, over every part of the body. In the females, these bands are alternately black and white; in the male, they are brown and yellow, but always of a lively and brilliant mixture, upon a short, fine, and thick hair; the lustre of which still more increases the beauty of the colours. The Zebra is, in general, less than the horse, and larger than the ass; and, although it has often been compared to those two animals, and called the *Wild horse*, and the *Striped Ass*, it is a copy neither of the one nor the other, and might rather be called their model, if all was not equally original in Nature, and if every species had not an equal right to creation.

"The Zebra is not the animal the ancients have indicated under the name *onagra*. There exists in the Levant, the eastern parts of Asia, and in the northern parts of Africa, a beautiful race of asses, who, like the finest horses, are natives of Arabia. This race differs from the common, by the size of the body, the slenderness of the legs, and the lustre of the hair; they are of a uniform, but commonly of a fine mouse colour, with a black cross upon the back and the shoulders; and sometimes they are of a bright gray colour, with a flaxen cross. The Zebra is also of a different climate from the onagra, and is only to be met with in the most eastern and the most southern parts of Africa, from Ethiopia to the Cape of Good Hope, and thence to Congo; it exists neither in Europe, Asia, nor America, nor even in all the northern parts of Africa: those which some travellers tell us they have seen at the Brazils, have been transported thither from Africa; those which others are recounted to have seen in Persia and in Turkey, have been brought from Ethiopia; and, in short, those which we have seen in Europe are almost all from the Cape of Good Hope. This point of Africa is their true climate, their native country, and where the Dutch have employed all their care to subject them and to render them tame, without having been hitherto able to succeed. That which we have seen, and which has served for the subject of our description, was very wild when he arrived at the royal menagerie in France; and he was never entirely tamed: nevertheless, he has been broken for the saddle, but there are precautions necessary: two men held the bridle, while a third was upon him. His mouth is very hard; his ears so sensitive, that he winces whenever any person goes to touch them. He was restiff, like a vicious horse, and obstinate as a mule; but, perhaps, the wild horse and the onagra are not less intractable; and there is reason to believe, that if the Zebra were accustomed to obedience and tameness from his earliest years, he would become as mild as the ass and the horse, and might be substituted in their room.

"The Zebra is chiefly found in the southern parts of Africa; often seen near the Cape of Good Hope;

and a penalty of fifty six-dollars is inflicted on any person who shoots one of them. Such of them as are caught alive are presented to the governor. Several have been brought to England, but, except in one instance, they have all displayed great wildness, and even ferocity. The exception was in that which was burnt some years ago at Exeter 'Change. It would allow young children to be put upon its back, and was once ridden from the Lyceum to Pimlico; but it was bred and reared in Portugal, from parents half reclaimed. In several other cases Zebras have attempted to injure spectators, and have not even spared their keepers. The voice of this creature is thought to have a distant resemblance to the sound of a post horn.

THE ZEBRA OF THE PLAINS.

"The Zebra which we have just described is confined to the mountains; the subject of the above cut inhabits the flat parts near the Cape. Till very recently, the difference between them was not accurately understood. 'The ground colour of its whole body (says Mr. Bennett) is white, interrupted by a regular series of broad black stripes extending from the back across the sides, with narrower and fainter ones intervening between each. Over the haunches and shoulders these stripes form a kind of bifurcation, between the divisions of which there are a few transverse lines of the same colour: but these suddenly and abruptly cease, and are not continued on the legs, which are perfectly white. Along the back there is a narrow longitudinal line, bordered on each side with white. The mane is throughout broadly and deeply tipped with black, and is marked by a continuation of the transverse bands of the neck. The lines of the face are narrow and beautifully regular; from the centre of the forehead they radiate downwards over the eyes; along the front of the muzzle they are longitudinal, the outer ones having a curve outwards; and on the sides they form broader transverse bands. From the confluence of these bands, on the extremity of the muzzle, the nose, and the lower lip, those parts become of a nearly uniform blackish brown. The tail is white: there is no longitudinal ventral line: and a large black patch occupies the posterior part of the ear, near the tip. The hoofs are moderately large, deep in front, shallow behind, and much expanded at their margin.'"

THE BROWN COATI.

"This animal of which we are now about to treat, many authors have called *coati-mondi*. It is of a smaller size than the rackoon; its body and neck, its head and nose, are of a more lengthened form; its upper jaw is an inch, or an inch and a half longer than the lower one; and its snout, which is moveable in every direction, turns up at the point. The eyes of the Coati are also smaller than the eyes of the rackoon, and are surrounded by three white spots; its hair is longer and coarser, its legs are shorter, and its feet longer; but, like the rackoon, its tail is diversified with rings, alternately black and fulvous; and to all its feet there are five claws.

"This animal has a practice of eating its own tail, which, when not mutilated, is longer than its body, and which it generally rears aloft, and can move with ease in any direction.

"From this circumstance one general inference may be drawn; namely, that in those parts which are elongated to a great degree, and of which the extremities are consequently very remote from the centre of feeling, that feeling must be weak, and the more so, the greater the distance and the smaller the part.

"As for the Coati in other respects, it is an animal of prey, which subsists on flesh and blood, which, like the fox, destroys small animals and poultry, hunts for the nests of little birds, and devours their eggs; and it is probably from this conformity of disposition, that some authors have considered the Coati as a species of small fox. It inhabits the woods of South America. In pursuit of its prey, it climbs trees with much agility. When tamed, which it easily is, it is fond of being caressed, but does not become much attached to its owner.

MOUNTAIN TRAVELLING IN SOUTH AMERICA.

Travellers in England, or even those who may have passed over the Pyrenees or Alps, can have but a faint idea of the labour and danger of crossing the Andes, that immense mountain chain by which the continent of South America is intersected, from its southern to its most northern extremity, dividing Peru and Chili, on the western coasts, from Columbia and Brazil on the eastern. Many of the Passes are upwards of 18,000 feet, or nearly four miles, in perpendicular height, above the level of the sea. In some parts men who have made it their sole occupation carry the passenger up the most steep and dangerous paths in a kind of chair fastened to their backs; but in general, the journey is made by travellers mounted on that patient and sure-footed animal, the mule.

The above engraving is from a print in the *Travels* of Colonel Hamilton, who, in 1823, visited South America, as chief commissioner from the king of Great Britain to the republic of Columbia. It represents a perilous situation common to the traveller in these terrific regions, when his safety depends wholly on the sure-footedness of his mule. In the Pass along which the traveller is proceeding, the road is separated by a chasm several feet in width, which forms the mouth of a yawning gulf, some hundreds of feet in depth. The sagacity shown by the mules, in leaping these dangerous openings, which are of common occurrence, is a subject of admiration among all travellers who have visited these regions. In some places, also, it is necessary to make the descent of immense heights; an undertaking of great danger, from their excessive steepness, and the slippery state of the mule-track. "On these occasions, the mules," says Colonel Hamilton, "take every precaution, and seem to know the danger they incur; for they inspect the road narrowly before them, and then place their fore legs close together, and slide down on their hams in a manner which scarcely any one but an eye-witness would credit."

Major Head, in his *Rough Notes of a Journey across the Pampas*, gives the following animated picture of the preparation of a train of baggage-mules for a journey over these dangerous Passes; and of some of the casualties common to these perilous journeys. "Anxious to be off" says he "I ordered the mules to be saddled; as soon as this was done, the baggage mules were ordered to be got ready. Every article of baggage was brought into the yard, and divided into six parcels (the number of the baggage-mules,) quite different from each other in weight and bulk, but adapted to the strength of the different mules.

"The operation of loading then began. The peon (the driver) first caught a great brown mule with his lasso, and then put a poncho (a large shawl in which the natives dress) over his eyes, and tied it under his throat, leaving the animal's nose and mouth uncovered. The mule stood still, while the captain and peon first put on the large straw pack-saddle, which they girthed to him, in such a manner that nothing could move it.

The articles were then placed, one by one, on each side, and bound together, with a force and ingenuity against which it was hopeless for the mule to contend.

"I could not help pitying the poor animal, on seeing him thus prepared for carrying a heavy load, such a wearisome distance, and over such lofty mountains as the Andes; yet, it is truly amusing to watch the nose and mouth of a mule when his eyes are blinded, and his ears pressed down upon his neck in the poncho. Every movement which is made about him, either to arrange his saddle or his load, is resented by a curl of his nose and upper lip, which, in ten thousand wrinkles, is expressive beyond description, of every thing that is vicious and spiteful: he appears to be planning all sorts of petty schemes of revenge, and as soon as the poncho is taken off, generally begins to put some of them into execution, either by running, with his load, against some other mule, or by kicking him. However, as soon as he finds that his burden is not to be got rid of, he dismisses, or perhaps conceals his resentment, and instantly assumes a look of patience and resignation.

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"As I was looking up at the region of snow, and as my mule was scrambling along the steep side of the rock, the captain overtook me, and asked me if I chose to come on, as he was going to look at a very dangerous part of the road, which we were approaching, to see if it was passable, before the mules came to it. In half an hour we arrived at the spot. It is the worst Pass in the whole road over the Cordillera mountains. The mountain above appears almost perpendicular, and in one continued slope down to a rapid torrent that is raging underneath. The surface is covered with loose earth and stones, which have been brought down by the waters. The path goes across this slope, and is very bad for about seventy yards, being only a few inches broad; but the point of danger is a spot where the water, which comes down from the top of the mountain, either washes the path away, or covers it over with loose stones. In some places, the rock almost touches one's shoulder, while the precipice is immediately under the opposite foot, and high above head are a number of loose stones, which appear as if the slightest touch would send them rolling into the torrent beneath, which is foaming and running with great violence. As soon as we had crossed the Pass, which is only seventy yards long, the captain told me it was a very bad place for baggage-mules; that four hundred had been lost there; and that we should probably also lose one. He said, that he could get down to the water at a place about a hundred yards off, and wait there with his lasso, to catch any mule that might fall into the torrent; and he requested me to lead on his mule. However, I resolved to see the tumble, if there was to be one, so the captain took away my mule and his own, and while I stood on a projecting rock, at the end of the Pass, he scrambled down on foot, till he got to the level of the water.

"The drove of mules now came in sight, one following another: a few were carrying no burdens, but the rest were either mounted or heavily laden. As soon as the leading mule came to the commencement of the Pass, he stopped, evidently unwilling to proceed, and of course all the rest stopped also.

"He was the finest mule we had, and, on that account, had twice as much to carry as any of the others. With his nose to the ground, literally smelling his way, he walked gently on, often changing the position of his feet, if he found the ground would not bear, until he came to the bad part of the Pass, when he stopped; but the peons threw stones at him, and he continued his path in safety, and several others followed.

"At length, a young mule, carrying a portmanteau, with two large sacks of provisions, and many other things, in passing the bad point struck his load against the rock, which knocked his two hind-legs over the precipice, and the loose stones immediately began to roll away from under them: however, his fore-legs were still upon the narrow path: he had no room to put his head there, but he placed his nose on the path to his left, and appeared to hold on by his mouth: his perilous fate was soon decided by a loose mule, who, in walking along after him, knocked his comrade's nose off the path, destroyed his balance, and heels over head the poor creature instantly commenced a fall, which was really quite terrific. With all his baggage firmly lashed to him, he rolled down the steep slope, until he came to the part which was perpendicular, and then he seemed to bound off, and turning round in the air, fell into the deep torrent, on his back, and upon his baggage, and instantly disappeared." To any other animal but a mule, this fall must have been fatal; he was carried down by the stream in spite of all his efforts, and, turning the corner of a rock, was given up for lost. "At length," the author continues, "I saw at a distance a solitary mule walking towards us! We instantly perceived that he was the phaeton whose fall we had just witnessed, and in a few moments he came up to us to join his comrades. He was, of course, dripping wet, his eye looked dull, and his whole countenance was dejected, but none of his bones were broken: he was very little cut, and the bulletin of his health was altogether incredible."

THE NIGER EXPEDITION.

Extract from a Letter of Richard Lander to his Brother.

You know that when we were here together, Abucco, chief of Damuggoo, had been at variance for several years with his brother, the ruler of Atta. On arriving at the former place from the coast, I was sorry to find the brothers, with their respective subjects, still engaged in that petty but obstinate and ferocious warfare which had distinguished the quarrel at its commencement. Determined, if possible, to effect a reconciliation between them, I prevailed on our old friend Abucco to accompany me to Atta, promising to introduce him to his brother, and pledging my life for his safety. The meeting took place on the 22d of November, and a highly interesting one it was, I assure you. Our party, preceded by Jowdie and a few drummers, were introduced into a large square enclosure. The chief, seated on a kind of throne, was surrounded by all his mallams, and a multitude of his attendants. His wives were seated under a veranda, from which were suspended several handsome Turkey carpets, which served them for a screen. Abucco instinctively drew back as he approached the throne, but, taking him by the hand, I led, or rather pulled, him towards his brother. At this moment his confidence seemed to have forsaken him entirely; his head hung down on his breast, and I could feel him tremble violently. Whilst I was displaying my presents to the chief of Atta, I perceived him several times bestow a hasty and displeased look on his brother, who had disengaged himself from my hand, and was sitting on the ground. Though seven years had elapsed since their last meeting, neither of the rulers uttered a word. The curiosity of the chief of Atta having in some measure been gratified, I immediately introduced his brother to his notice, by paying him a high compliment, which Abucco had certainly deserved. I then expressed the regret I felt on witnessing the bad effects of the misunderstanding which had existed between them for so many years; insisted on the necessity of brothers living together in harmony; and said, I was determined not to quit the spot until I had established a perfect reconciliation between them. The chief was extremely disconcerted, but he made no reply. I then desired Abucco to rise, and leading him to his brother, I took the right hand of each, and pressing both hands together, made them shake hands heartily, observing—

"You are now friends, and may God keep you so." The brothers were deeply affected, and neither of them could utter a syllable for several seconds afterwards. Every countenance beamed with delight at the happy termination of the interview, and the multitude gave vent to their feelings in a loud, long, general shout. For my part, I need not say, I cannot tell the heartfelt gratification I felt at that moment. But this is not the most important good that I have been the humble means of effecting at this place. From time immemorial it has been a custom with the rulers of Atta to sacrifice human beings on rejoicing days, and on all public occasions. At the interview which I have just described to you, two poor creatures were brought before us to be slain, in order that their blood might be sprinkled about the yard. I shuddered at the proposal, and begged with earnestness that nothing of the kind might be done. I assured the chief, he would one day have to give an account to God of every life he might wantonly destroy; and also made him sensible, that though after death his body would moulder into dust, his soul would live for ever, and that it would be happy or miserable in proportion to the good or bad actions he had performed, or might yet perform, in this world. The chief was evidently much affected at my words, and desired his followers to unbind the intended victims, and remove them from the yard. He then made a solemn promise to put an end to the custom of sacrificing human beings. As soon as this declaration was made known to the mallams, and the crowd of attendants in the yard, they all held up their hands in token of approbation, and shouted for joy. It is now seven or eight months since this promise was made, and I am happy to say that it has been religiously kept.—*Lond. Lit. Gazette.*

WATER SPOUTS.

A Water Spout is an extraordinary elevation of the water at sea, and is frequently very dangerous to ships. Its first appearance is in the form of a deep cloud, the upper part of which is white, and the under black. From the lower part of this cloud hangs down a conical tube, its largest end at the top, which is called the spout. Under this tube the sea appears in a state of boiling agitation—the water rises, and stands as a column or pillar, some yards above the common surface; and from its extremity it spreads around in a kind of smoke. Many instances have occurred where the water has risen when no spout has been visible.—Water spouts generally appear in warm dry weather, and when the sea is calm. This phenomenon is supposed, by some, to be occasioned by electricity, while others ascribe it to the meeting of contrary winds.—It is, however, admitted, that water spouts frequently appear without any indications of an adequate cause.

In the month of July, 1800, a water spout was seen rapidly to approach a ship navigating between the Lipari islands. It had the appearance of a viscid fluid, tapering in its descent, and proceeding from the cloud to join the sea. It moved at the rate of about two miles an hour, with a loud sound of rain, passing the stern of the ship, and wetting the after part of the main sail. It was thence concluded that water spouts are not continuous columns of water.

In November, 1801, about twenty miles from Trieste, in the Adriatic sea, a water spout was seen eight miles to the southward. Round its lower extremity was a mist, twelve feet high, nearly of the form of an Ionian capital, with very large volutes, the spout resting obliquely on its crown. At some distance from this spout, the sea began to be agitated, and a mist rose to the height of about four feet; a projection then descended from the blank cloud which was impending, and met the ascending mist about twenty yards above the sea, the last ten yards of the distance being described with great rapidity. A cloud of a light colour appeared to ascend in this cloud like quicksilver in a glass tube. The first spout then snapped at about one third of its height, the inferior part subsiding gradually, and the superior curling upward.

A rumbling noise is often heard at the time of their appearance, which happens generally in those months that are peculiarly subject to thunder storms, and they are commonly accompanied or followed by lightning. The analogy between water spouts and electricity may be made visible by hanging a drop of water to a wire, communicating with the prime conductor, and placing a vessel of water under it. In these circumstances, the drop assumes all the various appearances of a water spout, in its rise, form, and mode of disappearing. It is inferred, therefore, that the immediate cause of this extraordinary phenomenon is the attraction of the lower part of the cloud for the surface of the water.

APPEARANCE OF THE CITY OF MOSCOW.

The following very interesting description of the appearance of the city of Moscow, in 1814, two years after its invasion and destruction by the French, is copied from the Journal of a British traveller.

"The toils and fatigues of a long journey were now to have some repose; the long-looked-for object of our cares and wishes was approaching, and the spires of Moscow soon hailed our gladdened sight. When the weary pilgrim, with tired limbs, comes in view of the turrets of Medina, he stops at the distant fonts of the city, and his zeal and strength are awakened. In like manner did we, at the view of this holy city, feel refreshed and restored. We forgot our toils, our sufferings, and our cares; and a full and fresh tide of enthusiasm carried us along. And here we must pause: before us stood the ancient, and once proud spot of the mighty Czars, the once grand emporium of the North, where the fates of kings and nations were so proudly wielded; where despotism had so long reared its crest; where vice had so long held her court; and where the tides of wealth and luxury were for ages rolling in, as to a common centre. Here was to be seen every thing costly and magnificent; the grand mass of European and Asiatic splendor—the pride and envy of the northern world. This is the spot we gazed on: what a change! Lowly and prostrate it lies, its crumbling towers falling into decay, its proud banners torn from their burning walls, and scattering the shivered fragments to the hollow winds—its temples torn—its gates demolished—its houses ransacked—its streets laid waste. One sad and sorrowful picture of desolation is thrown around; wherever the traveller turns his wearied eye, it is still the same: he will yet see the demon of ruin stalking abroad in all the majesty of devastation, and treading on these mouldering piles, where once perched the proud eagle of the north; he will see the sorrowing inhabitant sighing over the ruins of his roofless dwelling, and clinging to the yet warm ashes of those sacred shrines, where so lately he had invoked his fathers and his saints.

Here, indeed, was a melancholy picture; on every side we turned our eye, fresh objects of dilapidated splendour presented themselves; fresh scenes of falling greatness were strewed around, and as we gazed on the crumbling heap, we needed not memory to give outline, we needed not fancy to give colouring—the picture was complete.

The appearance of the city is altogether extraordinary. The innumerable spires and domes glittering in the horizon, powerfully arrest and astonish the beholder. The extensive plain surrounding the suburbs, occupies thousands of acres, uncovered either by trees or houses; but bounded at a distance by forests of birch. Here the great army of Napoleon spread themselves, before and during the fire, sharing the spoils of this devoted city. To this spot were conveyed every thing that could be snatched from the all-devouring element; and even the helpless mothers and infants came to beg a covering for their nakedness, but were refused at the point of the bayonet. About two miles from the gate is the palace of Peterskoff, embellished by Peter the Great, and which he used as his favourite residence when at Moscow. It is a huge gothic brick building, encompassed by a circular wall, with regular bastions. One great and vast feature of desolation surrounds it. The vestiges of war are strewed around its mutilated walls. Here Napoleon fixed his quarters when he found the Kremlin no longer a place of security against the raging flames.

The entrance to the city exhibits a general scene of ruin, and appears from those parts of the houses now standing, to have consisted of brick and wooden houses, bundled together, without any order or neatness. At present, nothing more excites the appearance of wretchedness and filth; as you proceed, the streets assume a more regular form, with the remains of splendid edifices, divided from each other by mean hovels and gardens; churches of the most singular and gothic forms, with numerous gilded spires and domes, crown each other: it is almost impossible, by any description to convey a correct idea of this singular appearance.

At the termination of the street by which we entered the city, we ascended a gentle elevation, and approached a lofty and massive wall, which appeared as the bulwark of an interior city. This is partly supported by an earthen mound, with a broad open space, through which a muddy puddle runs, called Neglina river. To the right of this wall, another immediately appears more massive, and on a situation more elevated, and crowned with gilded spires and domes. This is the bulwark of the Kremlin, and the central part of the city. Moscow, like St. Petersburgh, is divided by a river, the Moskwa. It rises in the government of Smoleusko, 80 miles west of the city, and after a circuitous course of two hundred miles, and assuming other names, it joins the Volga at Nichney Novogorod. The river is not navigable, but during the spring season, at the dissolving of the ice, flat barges are floated within the eastern suburbs. It is crossed by a small stone bridge, of seven arches, at the south end of the Kremlin, and by another made of wooden planks, at a short distance below the north end of the Kremlin; besides these two bridges, there is another made of floating planks, in the suburbs, at which the barges are moored. That part of the river which flows along the east side of the Kremlin, is very shallow, and not fifty yards wide.

AN IMPROVEMENT.

Our subscribers being better satisfied to receive the Magazine in monthly parts than in weekly numbers, it seems unnecessary longer to continue the weekly division of heads. In our next part, therefore, we shall dispense with them, and change our title of "Weekly Abstract" for "Monthly Abstract" of General Knowledge. By this arrangement we shall gain some room, and be enabled to introduce a greater variety of subjects, as there will be but one article a month on a single branch instead of four.

Geography, which we shall now introduce, will form an interesting portion of our work, and its usefulness demands that it should be compiled not only with great care, but that the *latest* authorities should in all cases be consulted. Since the publication of the works of the most eminent authors, many very important discoveries have been made by travellers and others, which we shall collect and arrange in such a manner as to form a complete system of Geography.

The department of Astronomy will also be revived, and illustrated as formerly with new engravings.

Fuller says, that some impute the bald and threadbare style of the schoolmen to a design, that no vermin of equivocation should be hid under the nap of their words.

POETRY.

SCENE OF MISERY.

I saw at midnight's lone and silent hour,
A sorrowing mother with her sleeping babe,
Waiting in silence the return of him
Who was her husband. Pale and wan
And worn away with grief, she sat
A picture of dejection, sorrow, and despair.

Her eyes were full of tears, and as she gazed
Upon her senseless infant as it slept,
Unconscious of its mother's tears, that flowed
In secret silence on its sleeping form;
She thought of other times, the happier times,
When in the sunshine of her father's smiles,
Her mother's tender and paternal care:

With friends and kindred relatives around,—
Brothers and sisters in affection joined,—
She past the happy years of youth away;
When he,—now levelled with the brutes,—
Was every thing that's good and virtuous,
And for whom she left a home
Of peace and happiness, o'er which no cloud
Scarce ever rose to darken what was joy.

'Twas then the path of life looked plain,
And the deceitful dream that promised happiness,
And spread the path with visionary flowers,
She thought would bloom for ever bright,
And ne'er be withered by an adverse blast.

She mused too on the change, that fatal change,
Which blasted all her happiness, and made
The future wear an aspect dark and dismal;
She thought upon herself: what could she do!
When he who, in the presence of the Eternal One,
And men, and angels, solemnly did vow,
That he would guide, protect, and comfort her.
Was now a poor, debased, and miserable being:
A slave to his own appetite, and fallen
On a level with the beasts.

Suddenly the step
Of his approach was heard; I saw her shrink
With timid fear, as nearer yet the sound
Of his return fell on her listening ear.
It was not always thus. There was a time
When his return was welcomed back with smiles.

But it was different now. His tottering steps
Had reached his door: with trembling hand
'Twas opened. There he stood
With glaring eyeballs, and a look
That more became a devil than a man.
He gazed upon his sorrowing wife and sleeping babe
Without one spark of that affection which
Once burnt within, a pure and holy flame.

Rum had changed
Affection into hatred; had taken away
A heart of flesh, and in its stead,
Had placed a heart of stone; or such a one
As dwells within the tiger's breast,
Where pity never enters; and the melting cry
Of suffering innocence may plead in vain,
To find an entrance to his savage breast.—T.

Pawtucket Chronicle.

SECTION XXV.

THE CLASSIFICATION OF HUMAN KNOWLEDGE.

Lord Bacon classifies all learning relatively to the three intellectual faculties of Memory, Reason, and Imagination. Under the first of these divisions he places all that is merely Narration or History, of whatever kind it may be. Under the second are contained the different sciences, whether they respect the intellectual or the material world. Under the third he represents poetry and the fine arts.

In the investigation of abstract theories and speculative inquiries, doubtless this is an advantageous arrangement. Unquestionably those three intellectual faculties enter into the elements of all kinds of knowledge, and indeed form the principal foundation of those different departments above mentioned. But we question whether we can get at so definite an arrangement and classification of human knowledge, by referring all known things to the means by which we attained a knowledge of them, as we could by arranging the facts themselves, which are the substance of knowledge. It is the business of the three faculties above mentioned to search out and store up fact; but it is reserved to Abstraction and Association, under them, to classify those facts, and erect them into distinct systems. Whenever facts *are* put into a tangible shape, Reason again, with the aid of experience, applies them to practical purposes.

To possess facts is to possess knowledge; but we cannot retain them without memory, nor can we use them effectually without Judgment and Association. The advantages of associating facts of a similar nature together, for the sake of convenience and perspicuity are obvious. Mens' brains, confused and perplexed by an indefinite mass of all kinds of knowledge, crammed together without any reference to order or arrangement, are but mystifications mystified, and they are incapable of any vigorous or cogent intellectual exertion. But let system and arrangement dispel that confusion, and the mental powers begin to develop themselves. And here the secret lies. Knowledge lends power to its possessor, when he does it the justice of keeping it in order—when he knows where to find it, and how to apply it, on all occasions—when the mental resources are under a definite arrangement and classification.

The following is believed to be a good classification of human knowledge as far as it goes. The whole field we divide into three grand departments; and those we find capable of numerous divisions and subdivisions, each having some obvious characteristic which entitles it to the class in which we place it.

Spirit, or God.	Mixed Spirit. Man.	Nature. Matter.

I. GOD.

I. Scripture.
  1. Criticism.
  2. Antiquities.
  3. Interpretation.

II Evidence.
  1. Authenticity.
  2. Credibility.
  3. Divine Origin.
  4. Natural Religion.

III. Didactick Theology from Revelation and Nature.
  1. Existence and attributes of God.
  2. His works.
  3. Relations to man.

IV. History.
  1. False religion.
  2. Christianity, its doctrines and rights.

V. Practical Theology.

II. MAN.

I. Intellectual Philosophy.
  1. Analysis of the intellectual powers.
  2. Theory of Language.
  3. Logick.

II. Philosophy of Taste.
  1. General principles.
  2. Theory of the fine arts, as poetry, painting, sculpture, musick, gardening, and architecture.

III. Moral Philosophy.
  1. Emotions and passions.
  2. Theory of morals.
  3. Practical ethicks and laws of nature.
  4. Law. i. National. ii. Municipal.
  5. Political Philosophy. i. History of civilization. ii. Theory of government. iii. Science of legislation. iv. Political Economy. v. Political Geography.

III. MATTER.

I. Pure Mathematicks.
  1. Arithmetick, algebra, calculus.
  2. Geometry, elementary and higher.
  3. Theoretical mechanicks.

II. Mixed Mathematicks.
  1. Geodesy, Navigation.
  2. Mechanicks, Staticks, Dynamicks, Hydrostaticks, Hydrodynamicks, &c.
  3. Opticks.
  4. Astronomy.
  5. Mathematical Geography.

III. Physicks.
  1. Chymistry.
  2. Heat, Light, Electricity and Magnetism.

IV. Natural History.
  1. Zoology.
  2. Botany.
  3. Mineralogy.
  4. Conchology.
  5. Geology.
  6. Physical Geography.

HISTORY.

THE MOABITES.

These people were the descendants of Lot. After the destruction of the cities of the Plain, Lot stayed not long in Zoar but went with his daughters to the mountains on the east of the Dead Sea, and lived there in a cave. Here, his eldest daughter became the mother of Moab; and his youngest, the mother of Ben-ammi, as described in Gen. xix. 30—37. Moab and his posterity, having driven out the old inhabitants, possessed a mountainous tract probably in Cœlosyria, which was thence called Moabitis. They were under a monarchy, practised circumcision, and employed themselves chiefly in agriculture. They once seemed to have had the knowledge of the true God; but early in their history, we find their religion became monstrously corrupted, by the introduction of idolatry. They worshipped a variety of idols, among which are the names of Chemosh and Baal-peor. Some of their towns were named after their idols. They sacrificed oxen and rams, and not unfrequently offered human victims.

When they settled in this country, they drove out the Emims, descendants of Ham, whose name signifies *terrible*, and who are described in Deut. ii. 10. as "a people great, many and tall, as the Anakims; which also were accounted giants." The Moabites were addicted to obscenity in their manners. But they became quite a powerful and warlike nation; and as we shall see hereafter were one of those nations against which the Israelites had to contend before taking possession of the promised land.

THE AMMONITES.

Ammon or Ben-ammi, the father of the Ammonites, was the son of Lot, by his youngest daughter. They found, like the Moabites, the country which they took possession of, inhabited by giants, who gradually became extinct. The country was level and fruitful in grain. The capital was named Rabbah. They were governed by kings, and practised circumcision. Their religion doubtless, was originally pure in its principles, but it degenerated into a most stupid worship of Moloch, the god of fire, to whom they offered their children. The image of this idol is said to have been hollow, and divided into seven receptacles. And among these receptacles there is said to have been one for a child. This horrid custom, of burning their children by way of sacrifice to this grim idol, was at a place called Topheth. They were cruel and warlike. In the days of Moses, they were dispossessed in part by Sihon, the Amorite, who drove them into the mountains. They reappeared again, however, and subsequently joined Eglon king of Moab, against the Israelites, as we shall see in its place.

THE MIDIANITES.

The territory of the Midianites was situated near the confines of Arabia Petræa, on the shores of the Red Sea. They were the descendants of Midian, the fourth son of Abraham, by Keturah. Their situation rendered them mostly shepherds and merchants. The former lived in tents, and fed their flocks in plains, partly verdant, and partly sandy, and interspersed with rocks; stopping where they found springs and pasturage, and removing to other places as they failed.

They had great numbers of camels and dromedaries among their herds of cattle. These they sold to great advantage to such of their countrymen as were addicted to commerce; and they travelled over the desert with them and brought back the perfumes of Arabia. Their merchants were extremely wealthy, carrying on their commercial operations upon the Red Sea—hence we read of their *jewels of gold, chains, bracelets, rings, ear-rings, tablets, purple raiment, and the gold collars round the necks of their camels.* Judg. viii. 24. Numb. xxxi. 50.

Sir Isaac Newton allows them the honour of instructing Moses in writing.* The merchants must have understood Arithmetic—and situated as they were upon the Red Sea they could not have refrained from ship-building. Hence, being able to teach writing, and being merchants and mariners, it may well be supposed they had a competent skill in geography, geometry and astronomy.

Moses after having assisted the Egyptians in conquering the Ethiopians, fled among the Midianites. And here his conduct towards Jethro's daughters, in protecting them from the intrusion of the shepherds, called forth the gratitude of that priest of Midian, who gave him his daughter Zipporah in marriage. Moses lived with Jethro about forty years, when he set out for Egypt to execute his commission in relation to the delivery of the Israelites. But Moses sent back his wife, having had a dispute with her in relation to the circumcision of a child. Exod. xviii. 2.

The Midianite merchants were they who purchased Joseph and sold him to Potiphar in Egypt. The religion of Midian was not firmly established; but it at times approached the gross idolatry of the Moabites. Their government was sometimes monarchical, and sometimes aristocratical; and again at intervals they seemed fond of entire independence. They were much feared by the Israelites, for they were revengeful and cruel, and their wars were extremely bloody. Their mode of warfare was similar to that of the Cossacks of Napoleon's time.

IDUMÆA.

The Edomites or Idumœans, were the descendants of Abraham by Isaac his son, who was the father of Esau, called likewise Edom. Their territory was situated between Midian and the Mediterranean, bordering on that sea. In some places it was mountainous, but well watered, and was formerly fruitful in grapes and grain. In their flourishing state they carried on a great commerce, both by the way of the Red Sea and the Mediterranean, but principally with Tyre and Sidon. They kept on foot numerous forces, and a great number of armed chariots, which, in those times, decided the fate of battles. Their cities were strongly fortified; and they cultivated the sciences and arts. They have been censured for an unsociability of character, for harshness and pride, which never forsook them, even under the greatest misfortunes. They worshipped one God generally, with some exceptions; and practised circumcision. Their first government was patriarchal, but finally that of an elective monarchy. The antipathy which Esau constantly manifested against his brother Jacob for defrauding him of his birth right, is well known; and it seemed as if this feeling became hereditary among their descendants. These two fraternal nations, the Edomites and the Jews, were ever the most implacable enemies. Their wars with each other were unlike those between other nations; they appeared to be actuated by a kind of fury, which excited them not merely to conquer, but to exterminate each other. After many alternate successes and defeats, and the destruction of thousands of lives, they were ultimately subjugated by the Jews, and with them were reduced to slavery by the Babylonians.

Intimately connected with the history of these people, is that of the Amalekites. They were the descendants of Eliphaz, the first-born of Esau. In their taste for the arts, in their commerce, religion, and in their situation they resembled the Edomites. And in fact, we are disposed to think they were but a tribe of that nation. Some however, distinguish them as a great nation: some conjecture they were warriors and conquerors, and made a part of the *Shepherds* who subdued Egypt. The Jewish historians call them the *first of nations.* Numb. xxiv. 20. But with our scanty knowledge of them, we cannot perceive why they should have been so distinguished. However, whatever may have been their pristine rank or character in this respect, we find associated with the mention of their name, the fatal prediction; *their name shall be put out from under heaven.* They were engaged in perpetual wars with their neighbours, and they were finally nearly annihilated by the Jews.

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* Chron. of An. Kingd. Am'd. p. 210.

MYTHOLOGY.

THE MOST FAMOUS OF THE CONDEMNED IN HELL.

(Continued.)

IXION.

"Ixion was the son of Phlegyas: he killed his own sister, and obtained his pardon from the gods, who advanced him to heaven; and his prosperity made him so arrogant that he attempted to make love to Juno. This insolent attempt was discovered to Jupiter, who sent a cloud in the shape of Juno, which the deceived lover embraced, and thence those monsters the Centaurs were born: he was then thrown down to the earth again; where, because he boasted every where that he had gained the heart of the queen of the gods, he was struck with thunder down into hell, and tied fast to a wheel, which continually turns about.

SISIPHUS.

"Sisiphus was a famous robber killed by Theseus; he is condemned in hell to roll a great and unwieldy stone to the top of a high hill, and as oft as the stone almost touches the top of the mountain, it slides down again.

THE BELIDES.

"The Belides were fifty virgin sisters, so called from their grandfather Belus; and named also Danaides, from their father Danaus, who married them to the fifty sons of his brother. The oracle foretold, that Danaus should be slain by his son-in-law: wherefore he commanded his daughters to provide daggers, and on their wedding night to kill their husbands. The daughters performed their promises, and killed their husbands, except Hypermnestra, for she spared Lynceus, her husband, who afterward killed Danaus, and took his kingdom. This great impiety was thus punished: they were condemned to draw water out of a deep well, and fill a tub, that (like a sieve) is full of holes; the water runs out as fast as it is put in, so they are tormented with a perpetual and unprofitable labour.

They hourly fetch the water that they spill.

TANTALUS.

"Tantalus, another remarkable criminal, was the son of Jupiter and the nymph Plota. He invited all the gods to a feast, to get a plain and clear proof of their divinity: when they came, he killed and quartered his own son Pelops, and boiled him, and set the joints before them to eat. All the gods abstained from such horrible diet, except Ceres, who being melancholy and inattentive from the recent loss of her daughter, ate one of the child's shoulders. Afterwards the gods sent Mercury to recal him to life, and gave him an ivory shoulder, instead of the shoulder which Ceres had eaten. This Pelops was the husband of Hippodamia, who bore him Atreus and Thyestes; the latter of whom was banished, because he seduced Œrope his brother Atreus' wife; and when he was recalled from banishment, he ate up his children; for Atreus killed them, and had them served in dishes to the table, where he and Thyestes dined together. It is said, that the sun could not endure so horrible a sight, and turned his course back again to the east. But as Tantalus' crime was greater, so was his punishment; for he is tormented with eternal hunger and thirst in the midst of plenty both of meat and drink: he stands in water up to his lips, but cannot reach it; and fruit is placed just to his mouth, which he cannot take hold of.

THE SEMI-DEI AND HEROES.

"The Semi-Dei, or Demi-Gods, were those who had human bodies, sacred minds, and celestial souls. They were born in this world for the good and safety of mankind.

HERCULES.

"There were many heroes called Hercules, but (as Cicero says) the famous actions of them all are ascribed to him who was the son of Jupiter by Alcmena, the wife of Amphytrio, king of Thebes.

"When Amphytrio was absent, Jupiter put on his shape and dress, and came to Alcmena; who, thinking her husband was returned, entertained the deceitful god, and had by him a son, whose limbs were extraordinary and wonderfully large, his constitution robust, and his body full of vigour.

"When Juno had discovered the conduct of Jupiter, she began to hate Hercules so violently, that she endeavoured to ruin him. First, she obtained an edict from Jupiter, which she endeavoured to turn to his utter destruction. Again, she sent two vipers to destroy him when he lay crying in the cradle: but it was in vain; for the valiant infant griped them in his hands till they perished by his grasp, as we are told by Ovid in his epistles.

"He had two proper names, Hercules and Alcides; but his surnames are innumerable. His parents called him Alcides, from his extraordinary strength, in which he greatly excelled all mankind. He was afterwards called Hercules, from the glory which Juno caused him: for when she exposed him to the greatest dangers, she rendered him most illustrious, and by enjoining him so many labours, she only exercised his patience and his courage.

"Hercules was subjected to Euristheus, not only by the edict of Jupiter and unkindness of Juno, but also because the oracle of Apollo at Delphi advised and persuaded him to submit himself, and obey Euristheus' commands; and especially, to undergo, willingly, the twelve labours which his master should lay upon him. Hercules obeyed the Fates, and served Euristheus twelve years: he performed the most dangerous and difficult commands with a suitable courage and success. Some say that Hercules served him voluntarily, and performed these difficult tasks, to show how great love he bore Euristheus.

"Though Hercules performed an infinite number of great and memorable actions, twelve are especially celebrated: and those twelve are comprised in as many Latin verses, translated out of the Greek:

"—— The Cleonian lion first he kills;
With fire and sword then Lerna's pest he quells,
Of the wild boar he clears th' Er'manthean fields;
The brass-foot stag with golden antlers yields,
He Stympha clears of man-devouring birds;
And next the bouncing Amazon ungirds:
The stables of king Augeas he cleans;
The Cretan bull he vanquishes and chains:
Diomedes' horses him their conqu'ror own;
Then he brings low three-headed Geryon:
Hesperian apples next his name sustains;
And his last labour Cerberus enchains.

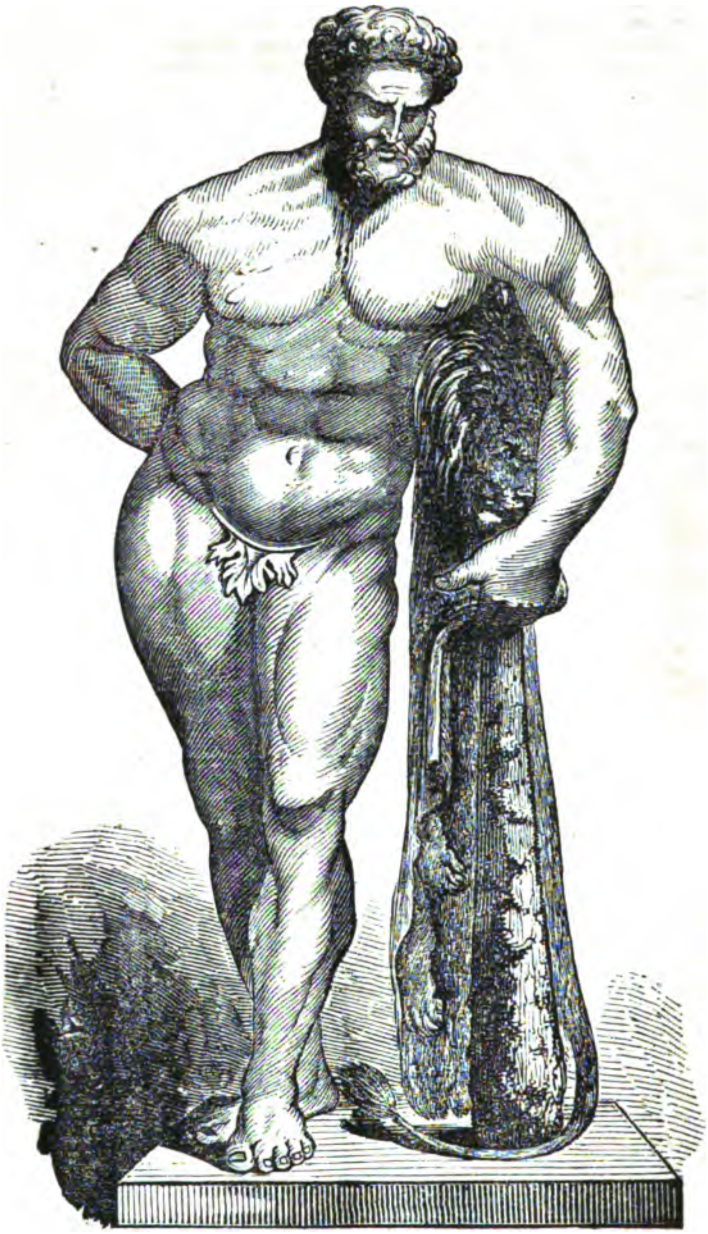
"The particular account of these twelve is this

"The first labour of Hercules was, that he tore in pieces, with his nails, the lion in the woods of Nemæa, which, some say, fell from the orb of the moon, and was invulnerable by any weapon. This place was also named Cleone, from which the lion was also called Cleoneus. He afterwards skinned the lion, and with the skin made himself a shield and a breastplate.

2. There was a *hydra*, a serpent in the lake Lerna, in the field of Argos, that had seven heads; some say nine, others fifty. When any of these heads were cut off, another presently sprang up in the place of it: unless the blood which issued from the wound was stopped.

"Iolaus, the son of Iphiclus, procured for him lighted brands from the neighbouring wood, and with them Hercules stanched the blood issuing from the wounds he made. This seasonable assistance was not forgotten; for when Iolaus was grown to decrepid age, Hercules, by his prayers, restored him to his youth again.

3. He bound the wild boar, whose fierceness and bigness were equally admirable, in the mountain Erymanthus of Arcadia; and afterwards brought it to Euristheus.



HERCULES.

4. He was ordered to bring to Mycenæ a hind, whose feet were brass, and horns gold. Nobody dared to wound her, because she was consecrated to Diana, nor could any body outrun her: yet Hercules hunted her a year on foot, and caught her, and brought her away on his shoulders.

5. He partly killed and partly drove away the birds called Stymphalides, from lake Stymphalus, which used to feed upon man's flesh.

6. He defeated the army of the Amazons, and took from Hyppolite, their queen, the finest belt in the world.

7. He in one day cleansed the stable of Augeas, by turning the course of a river into it. This stable had never been cleansed, although three thousand oxen stabled in it thirty years. Whence, when we would express a work of immense labour and toil, in proverbial speech, we call it "cleansing the Augean stable."

8. He tamed a great bull, that did much mischief in the island of Crete, and brought him bound to Euristheus.

9. He overcame Diomedes the most cruel tyrant of Thrace, who fed his horses with the flesh of his guests. Hercules bound him, and threw him to be eaten by those horses to which the tyrant had exposed others.

10. He overcame in war, Geryon, king of Spain, who had three bodies, and took his bay oxen that ate man's flesh, and brought them into Italy, when he had killed the dragon with seven heads, and the two-headed dog which guarded him.

11. He killed the dragon that watched, and then

carried away the golden apples in the gardens of the Hesperides; whence perhaps he is called Melius, and apples were offered up in his sacrifices. In Bœotia, when no bull, (or sheep) could be procured at the time of sacrifice, they took an apple, and stuck into it four straws, which represented four legs, and two more for horns, with another for a tail, and offered Hercules this apple instead of a victim.

12. Lastly, he was commanded by Euristheus to go down into hell, and bring away thence the dog Cerberus. This he performed without delay, bound the three-headed monster in a triple chain, and by force brought him up to the earth. When Cerberus saw the light he vomited, and thence the poisonous herb wolf's-bane *Aconitum* sprang. These are the twelve labours of Hercules.

13. He vanquished the cruel and enormous giant Antæus, the son of the earth, who was above sixty-four cubits high, and who forced strangers to wrestle with him. Hercules threw this giant down thrice, and perceiving that he recovered new strength as oft as he touched the earth, he lifted him in his arms from the ground, and then despatched him.

14. Busiris the tyrant used to sacrifice all the strangers that he caught to his father Neptune, till Hercules sacrificed both him and his son upon the same altar.

15. He killed the giants Albion and Bergeon, who intended to stop his journey: and when in the fight his arrows were consumed, so that he wanted arms, he prayed to Jupiter, and obtained from him a shower of stones, with which he defeated and put to flight his adversaries. This, they say, happened in that part of France, anciently called Gallia Narbonensis; which place is called the Stony Plain, *Campus Lapideus.*

16. When Atlas was weary of his burden, Hercules took the heavens upon his shoulders. He overcame the robber Cacus, who spit fire, and strangled him. He shot the eagle that devoured the liver of Prometheus, as he lay chained to the rock. Also, slew Theodamus, the father of Hylas, because he denied him victuals: but he took care of Hylas, and was kind to him.

17. He delivered Hesione; daughter of Laomedon, king of Troy, from the whale in this manner: he raised on a sudden, a bank in the place where Hesione was to be devoured, and stood armed before it: and when the whale came seeking his prey, Hercules leaped into his mouth, slided down his throat, destroyed him, and came away safe. Laomedon, after this, broke his word, and refused to give Hercules the reward he promised; therefore he took it by force, and pillaged the city of Troy; giving to Telamon, who first mounted the wall, the lady Hesione, as a part of the booty.

18. In fighting for Deianira, Hercules overcame Achelous, the son of Oceanus and Terra, though Achelous first turned himself into a serpent, then into a bull. By plucking one of his horns off, he obliged him to yield; but Achelous purchased his horn again; giving Amalthœa's horn in its stead. The meaning of which is this: Achelous is a river of Greece, whose course winds like a serpent; its stream is so rapid, that it makes furrows where it flows, and a noise like the roaring of a bull: and indeed it is common among the poets to compare a river to a bull. This river divided itself into two streams, but Hercules forced it into one channel; that is, he broke off one of the horns or streams. The lands thus drained became fertile; so that Hercules is said to have received the horn of plenty.

19. Deianira was daughter of Œneus, king of Œtolia. Hercules carried her to be married, and in their way they were stopped by a river: but the centaur Nessus offered to carry Deianira over upon his back. Nessus, when she was over, insulted her; which Hercules observing, while he swam, shot him with an arrow. When Nessus was dying, he gave Deianira his bloody coat, and told her, if a husband wore that coat, he would never follow unlawful pursuits. The credulous lady soon after experienced the virtue of it, far otherwise than she expected. For Hercules, who had surmounted so many and so great labours, was at length overcome by the charms of Omphale, queen of Lydia, and, to gratify her, changed his club into a distaff, and his arrows into a spindle. His love also to Iole, daughter of Eurytus, king of Oechalia, brought on him destruction. For his wife Deianira being desirous of turning him from unlawful objects, sent him Nessus' coat to put on when he went to sacrifice; which drove him into such distraction that he burned himself on the pile he had raised, and was accounted among the number of gods."

JASON.

"Jason, the son of Œson king of Thessalia, by Alcimede, was an infant when his father died, so that his uncle Pelius administered the government. When he came of age, he demanded possession of the crown; but Pelius advised him to go to Colchis, under pretence of gaining the golden Fleece thence, though his real intention was to kill him with the labour and danger of the journey.

"The Golden Fleece was the hide of a ram, of a white or purple colour, which was given to Phryxus, son of Athamus and Nephele, by his mother. Phryxus and his sister Helle, fearing the designs of their step-mother Ino, got on a ram to save themselves by flight. But while they swam over the narrowest part of Pontus, Helle, affrighted at the tossing of the waves, fell down; whence the sea was called Hellespont. Phryxus was carried over safe, and went to Æta, king of Colchis, a country of Asia, near the Pontus; where he was kindly received, and sacrificed the ram to Jupiter, or Mars, who afterwards placed it among the constellations. Only his hide or fleece was hung up in a grove sacred to Mars. It was called the Golden Fleece, because it was of a golden colour; and it was guarded by bulls that breathed fire from their nostrils, and by a vast and watchful dragon, as a sacred and divine pledge, and as a thing of the greatest importance."

THESEUS.

"The parents of Theseus were Æthra and Ægeus, king of Athens. Minos king of Crete, made war against Ægeus, because the Athenians had dishonourably and barbarously killed his son, who carried the prize in the games. When he had banished the Athenians, he imposed this severe condition upon them, that they should send seven of the most noble youths of their country into Crete by lot every year. In the fourth year the lot fell upon Theseus, which mightily grieved and troubled his father Ægeus. Theseus went on board a ship, whose sails and tackle were black, and received this command from his father. 'If by the propitious providence of Heaven he escaped the dangers, and did return safe unto his own country again, that then he should change his black sails into white ones, that his father, being assured of his safety by that signal, might be sensible of his happiness as soon as might be.'

"The event was fortunate to Theseus; but very unfortunate to his father Ægeus: for when Theseus came to Crete, he was shut up in the Labyrinth; but he slew the Minotaur, and escaped out of that inextricable prison by the help of Ariadne. After this he set sail for Athens in the same mournful ship in which he came to Crete, but forgot to change his sails, according to the instructions which his father had given him; so that, when his father beheld from a watchtower the ship returning with black sails, he imagined that his son was dead, and cast himself headlong into the sea, which was afterward called the Ægean or Black Sea, from his name and destiny.

"The actions of Theseus were so famous that they accounted him a Hercules. For, 1. He killed the Minotaur. 2. He overcame the centaurs. 3. He vanquished the Thebans. 4. He defeated the Amazons. 5. He went down into hell; and returned back into the world again.

"He and Pirithous, his most intimate friend, the lawful son of Ixion, agreed never to marry any women except Jupiter's daughters. Theseus married Helena, the daughter of Jupiter and Leda, and none of Jupiter's daughters remained on earth for Pirithous; therefore they both went down into hell to steal Proserpine away from her husband Pluto. As soon as they entered hell, Pirithous was unfortunately torn in pieces by the dog Cerberus; but Theseus came alive into the palace of Pluto, who fettered him, and kept him till Hercules was sent into hell by Euristheus to rescue him."

ARIADNE.

"Ariadne was the daughter of Minos, king of Crete. She having delivered Theseus out of the Labyrinth by the means of a thread, followed him in his return to the Island of Naxus, where he perfidiously and ungratefully left her. But Bacchus, pitying her miserable condition, married her, and gave her a crown that was illuminated with seven stars, which he had before received from Venus. This crown was called Gnossia Corona, and Ariadne herself was surnamed Gnossis, from the city of that name in Crete. After the death of Ariadne, the same was carried among the stars, and made a constellation in the heavens. It was thought that Diana caused the death of Ariadne, because she preserved not her virginity."

CASTOR AND POLLUX.

"Castor and Pollux are twin brothers, the sons of Jupiter and Leda, who was the wife of Tyndarus, king of Laconia, whom Jupiter loved, but could not succeed in his amour till he changed himself into a swan; which swan was afterwards made a constellation. Leda produced two eggs, which hatched the twin brothers. Out of one egg came Pollux and Helena, who sprang from Jupiter, and were therefore immortal. But out of the other, by Tyndarus her husband, came Castor and Clytemnestra, who were mortal. Yet both Castor and Pollux are frequently called Tyndaridæ by the poets, as Helena is also called Tyndaris, from the same king Tyndarus.

"Castor and Pollux accompanied Jason when he sailed to Colchis; and, when he returned thence, they recovered their sister Helena from Theseus, who had stolen her, by overcoming the Athenians that fought for him, to whom their clemency and humanity were so great after the defeat, that the Athenians called them the sons of Jupiter; and hence white lambs were offered upon their altars. But although they were both at the same birth, and, as some think, out of the same egg, yet their tempers were different.

"Castor being, as some say, a mortal person, was killed by Lynceus: upon which Pollux prayed to Jupiter to restore him to life again, and confer an immortality upon him. But this could not be granted. However he obtained leave to divide his immortality between himself and his brother Castor, and thence it came to pass that they lived afterwards by turns every other day, or, as some say, every other fortnight. After the death of Castor, a kind of *pyrrhik*, or dance in armour, was instituted to his honour; which was performed by young men armed, and called "Castor's dance."

"At length they both were translated into heaven, and made a constellation, which is still called Gemini."

ÆSCULAPIUS.

"Æsculapius is represented as a bearded old man, leaning on his jointed cane, adorned with a crown of laurel, and encompassed with dogs. He is the god of the physicians and physic, and the son of Apollo by the nymph Ceronis. He improved the art of physic, which before was little understood; and for that reason they accounted him a god. Apollo shot the nymph his mother when she was pregnant, because she admitted the addresses of another young man after he had become enamoured of her. But he repented after he had killed her, took the child alive, and delivered him to be educated by the physician Chiron, who taught him his own art: the youth made so great a progress in it, that because he restored health to the sick, and gave safety to those whose condition was desperate, he was thought to have a power of recalling the dead to life again. Upon this, Pluto, the king of hell, complained to Jupiter that his revenue was very much diminished, and his subjects taken from him by means of Æsculapius; and at length, by his persuasion, Jupiter killed him with a stroke of thunder.

PROMETHEUS.

"Prometheus, the son of Japetes, and the father of Deucalion, was the first, as we find in history, that formed man out of clay; which he did with such art and skill, that Minerva was amazed, and proffered to procure him any thing from heaven which would complete his work. Prometheus answered, that he did not know what in heaven would be useful to him, since he had never seen heaven. Therefore Minerva carried him up into heaven, and showed him all its wonders. He observed that the heat of the sun would be very useful in animating the man which he had formed; therefore he lighted a stick by the wheel of the sun's chariot, and carried it lighted with him to the earth. This theft displeased Jupiter so much, that he commanded Mercury to bind him to the mountain Caucasus; and then he sent an eagle to him there, which continually gnawed his liver. Yet some say, that he was not punished because he stole fire from heaven, but because he made a woman, which, they say, is the most pernicious creature in the world.

"Prometheus had been serviceable to Jupiter, for he discovered to him his father Saturn's conspiracy, and prevented the marriage of Jupiter and Thetis, which he foresaw would be fatal; therefore Jupiter suffered Hercules to shoot the eagle, and set Prometheus at liberty."

HESPERUS.

"Hesperus was the brother of Atlas, and because he lived some time in Italy, that country was called anciently Hespera from him. He frequently went up to the top of the mountain Atlas to view the stars. At last he went up and came down from the mountain no more. This made the people imagine that he was carried up into heaven; upon which they worshipped him as a god, and called a very bright star from his name Hesperus, Hesper, Hesperugo, Vesper and Vesperugo, which is called the evening star, when it sets after the sun; but when it rises before the sun, it is called [*Phosphorus*] or Lucifer; that is, the morning star. Further, this Hesperus had three daughters, Egle, Perethusa, and Hesperethusa; who in general were called the Hesperides. It was said, that in their gardens trees were planted that bore golden fruit; and that these trees were guarded by a watchful dragon, which Hercules killed, and then carried away the golden apples. Hence the phrase, to give some of the apples of the Hesperides; that is, to give a great and splendid gift."

ORPHEUS.

"Orpheus and Amphion excelled in musick; in which they were so skilful, that by playing on the harp they moved not only men, but beasts, and the very stones themselves.

"Orpheus, the son of Apollo by Calliope the Muse, with the harp that he received from his father, played and sang so sweetly, that he tamed wild beasts, stayed the courses of rivers, and made whole woods follow him. He descended with the same harp into hell to recover from Pluto and Proserpine, his wife Euridice, who had been killed by a serpent, when she fled from the violence of Aristæus. Here he so charmed both the king and queen with the sweetness of his musick, that they permitted his wife to return to life again upon this condition, that he should not look upon her till they were both arrived upon the earth: but so impatient and eager was the love of Orpheus, that he could not perform the condition; therefore, she was taken back into hell again. Upon this, Orpheus resolved for the future to live a widower: and with his example alienated the minds of many others from the love of women. This so provoked the Mænades and Bacchæ, that they tore him in pieces: though others assign another reason for his death, which is this: the women, by the instigation of Venus, were so inflamed with the love of him, that quarrelling with one another who should have him they tore him in pieces. His bones were afterward gathered by the Muses, and reposed in a sepulchre, not without tears; and his harp was made the constellation Lyra."

AMPHION.

"Amphion was the son of Jupiter by Antiope. He received his lute and harp from Mercury; and with the sound thereof moved the stones so regularly, that they composed the walls of the city of Thebes.

> Amphion too, as story goes, could call
> Obedient stones to make the Theban wall.
> He led them as he pleas'd: the rocks obey'd,
> And danc'd in order to the tunes he play'd.

"The occasion of which fable was this: Orpheus and Amphion were both men so eloquent, that they persuaded those who lived a wild and savage life before, to embrace the rules and manners of civil society."

ARION.

"Arion is a proper companion for these two musicians, for he was a lyric poet of Methymna, in the island of Lesbos, and gained immense riches by his art. When he was travelling from Lesbos into Italy, his companions assaulted him to rob him of his wealth; but he entreated the seamen to suffer him to play on his harp, before they cast him into the sea: he played sweetly, and then threw himself into the sea, where a dolphin, drawn thither by the sweetness of his musick, received him on his back, and carried him to Tenedos.

> He on his crouching back sits all at ease,
> With harp in hand by which he calms the seas,
> And for his passage with a song he pays.

"The dolphin, for this kindness, was carried into heaven, and made a constellation."

ACHILLES.

"Achilles was the son of Peleus by Thetis. His mother plunged him in the Stygian waters when he was an infant, which made his whole body ever after invulnerable, excepting that part o his foot by which he was held when he was washed. Thetis, his mother, had heard from an oracle that he should be killed in the expedition against Troy. On the other hand, Calchas the diviner had declared, that Troy could not be taken without him. By the cunning of Ulysses he was forced to go: for when his mother Thetis hid him in a boarding-school (in Gynecæo) in the island of Scycros, one of the Cyclades, in the habit of a virgin among the daughters of king Lycomedes, Ulysses discovered the trick: he went thither in the disguise of a merchant, and took with him several goods to sell. The king's daughters, began to view and handle curiously the bracelets, the glasses, the necklaces, and such like women's ornaments; but Achilles, on the contrary, laid hold of the targets, and fitted the helmets to his head, and brandished the swords, and placed them to his side. Thus Ulysses plainly discovered Achilles from the virgins, and compelled him to go to the war: after that Vulcan, by Thetis' entreaty, had given him impenetrable armour. Achilles, at Troy, killed Hector, the son of Priamus; and was killed himself by Paris, by a trick of Polyxena: and all the Nymphs and Muses are said to have lamented his death."

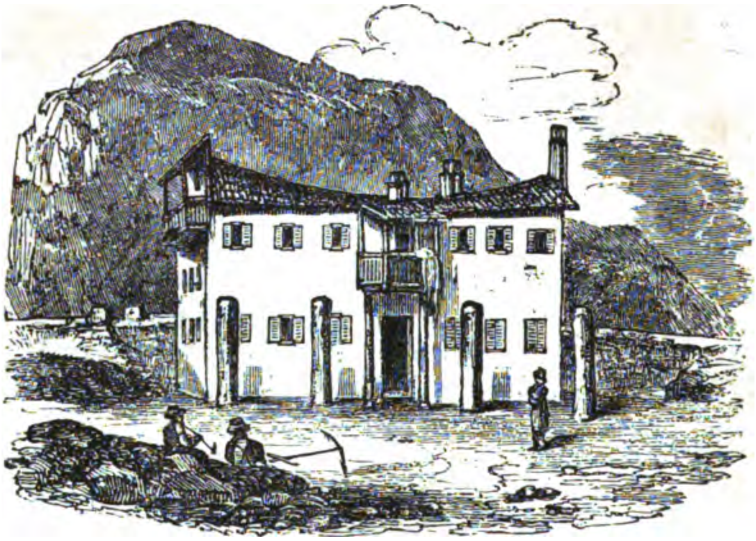
ULYSSES.

"Ulysses was the son of Laertes and Anticlea. His wife was Penelope, a lady highly famed for her prudence and virtue. He was unwilling that the Trojan war should part him and his dear wife; therefore, to avoid the expedition, he pretended to be mad, joining the different beasts to the same plough, and sowing the furrows with salt. But this pretence was detected by Palamedes, who laid his infant son in the furrow, while Ulysses was ploughing, to see whether he would suffer the ploughshare to wound him or not. When Ulysses came where his son lay, he turned the plough, and thus it was discovered that he was not a madman, and he was compelled to go to the war. There he was very serviceable to the Grecians, and was almost the sole occasion of taking the town. He forced Achilles from his retreat, and obtained the arrows of Hercules from Philoctetes, which he brought against Troy. He took away the ashes of Laomedon, which were preserved upon the gate Scæa in Troy. He stole the Palladium from the city; killed Rhœsus, king o. Thrace, and took his horses, before they had tasted the water of the river Xanthus, in which things the destiny of Troy was wrapped up: for if the Trojans had preserved them, the town could never have been conquered.

"When Ulysses departed from Troy to return home, he sailed backward and forward ten years; opposing winds and bad weather preventing his return. During which time, 1. He put out the eye of Polyphemus with a fire-brand; and then sailing to Æolia, he there obtained from Æolus all the winds which were contrary to him, and put them into leathern bags. His companions believing that the bags were filled with money, intended to rob him; therefore, when they came almost to Ithaca, they untied the bags, and the winds gushed out, and blew him back to Æolia again. 2. When Circe had turned his companions into beasts, he first fortified himself against her charms with the antidote that Mercury had given him, and then ran into her cave with his sword drawn, and forced her to restore his companions to their former shapes again. After which he and Circe were reconciled, and he had by her Telegonus. 3. He went down into hell to know his future fortune from the prophet Tiresias. 4. When he sailed to the islands of the Sirens, he stopped the ears of his companions, and bound himself with strong ropes to the ship's masts: by these means he avoided the dangerous snares into which by their charming voices, they led men. 5. And lastly after his ship was broken and wrecked by the waves, he escaped by swimming; and came naked and alone to the port of Phæacia, where Nausica, the daughter of king Alcinous, found him hidden among the young trees, and entertained him civilly. When his companions were found, and the ship refitted, he was sent asleep into Ithaca, where Pallas awaked him, and advised him to put on the habit of a beggar. Then he went to his neat-herds, where he found his son Telemachus; and from them he went home in a disguise, where, after he had received several affronts from the wooers of Penelope, by the assistance of the neat-herds and his son, to whom he discovered himself, he set upon them, and killed them every one; and then received his Penelope."

PENELOPE.

"Penelope, the daughter of Icarus, was a rare and perfect example of chastity. For though it was generally thought that her husband Ulysses was dead, since he had been absent from her twenty years, yet neither the desires of her parents, nor the solicitations of her lovers, could prevail upon her to marry another man, and to violate the promises of constancy which she gave to her husband when he departed. And when many noblemen courted her, and even threatened her with ruin unless she declared which of them should marry her, she desired that the choice might be deferred till she had finished a piece of needlework, about which she was then employed: but undoing by night what she had worked by day, she delayed them till Ulysses returned and killed them all. Hence came the proverb, 'To weave Penelope's web;' that is, to labour in vain; when one hand destroys what the other has wrought."



LORD BYRON'S DEATH-PLACE AT MISSOLONGHI.

The above engraving is from a sketch taken on the spot by a lady. It represents the house in which lord Byron died at Missolonghi. The apartment in which he expired is at the top on the left, distinguished by an awning and balcony in front of the window.

Lord Byron went to Greece for the laudable purpose of offering his personal means and services to assist those unfortunate people in their struggle for freedom. He embarked from Genoa in July 1823, in the English brig Hercules, which he had chartered at his own expense, and loaded with arms, ammunition and hospital stores for the benefit of the Greeks. He arrived at Missolonghi after many dangers, difficulties and delays, on the 5th January, 1824. "He was received by Prince Mavrocordato, at the head of the magistracy and the whole population civil and military, with distinguished honours, and every token of gratitude and delight." At his own expense, he soon formed and equipped a corps of Suliotes, numbering between five and six hundred. "Having received a regular commission as an officer in the Greek service, he assumed the command." But he found them undisciplined, riotous and unmanageable. He also commanded a corps of artillery, supplied by the Greek Committee in London. He at one time got all things in readiness to attack Lepanto, then in the hands of the Turks; but his disorderly soldiers broke out the day before the meditated attack into open mutiny; and their faithless conduct and extravagant demands compelled him to abandon the expedition. He laboured incessantly at Missolonghi both mentally and bodily, to heal intestine dissensions, and to strengthen the Greeks against their enemies. In the midst of his labours, however, on the 9th of April, he was attacked with an inflammatory fever, which ended his days on the 19th.

The same day Mavrocordato issued a proclamation announcing the event, and after other things decreeing:

"1st. To-morrow morning, at day-light, thirty-seven minute guns will be fired from the Grand Battery, being the number which corresponds with the age of the illustrious deceased.

"2d. All the publick offices, even the tribunals, are to remain closed for three successive days.

"3d. All the shops, except those in which provisions are sold, will also be shut; and it is strictly enjoined, that every species of publick amusement, and other demonstrations of festivity at easter, shall be suspended.

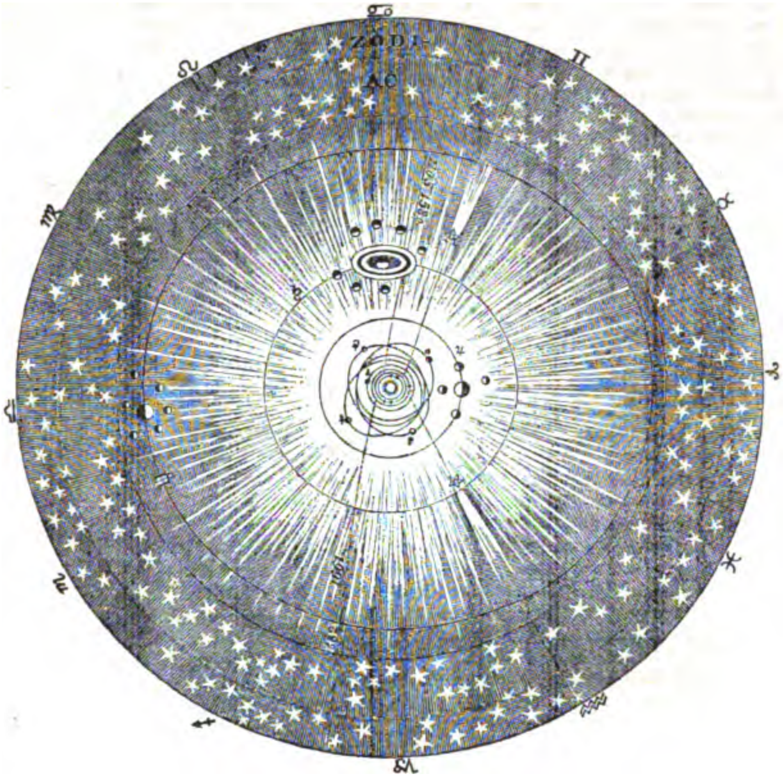
"4th. A general mourning will be observed for twenty-one days; and prayers and a funeral service are to be offered up in all the churches.

His body was taken to London, where it lay two days in state, and on the 16th July was deposited in his family vault, in the parish church of Hucknell, a small village near Newstead Abbey.

"Over the chancel of the church is a tablet of white marble, bearing the following inscriptions:

In the vault beneath,
Where many of his ancestors and his mother
are buried,
Lie the remains of
GEORGE GORDON NOEL BYRON,
Lord Byron of Rochdale,
In the county of Lancaster,
The author of "Childe Harold's Pilgrimage."
He was born in London on the 22d of
January, 1788.
He died at Missolonghi, in Western Greece,
On the 19th of April, 1824,
Engaged in the glorious attempt to
Restore that
Country to her ancient freedom and
Renown."

ASTRONOMY.



THE COPERNICAN SYSTEM.

This system is called the True Solar System, and is now universally received amongst mathematicians and astronomers, and indeed very generally admitted by all to be not only the *true*, but also the most *ancient* system in the world, or of which we have any account; and is in truth more consistent and even more conformable to natural appearances and the circumstances of the celestial motions, than any other hypothetical system of Astronomy, that has ever been propagated amongst mankind.

This system was first of all, as far as the moderns have been able to ascertain, introduced into Greece and Italy, about 530 years before the commencement of the Christian era, by the great Pythagoras and his disciples, from whom it has been called the *Pythagorean System.*

The opinions of Pythagoras, though perhaps derived originally from some Eastern nation, were held by some of his pupils; but were either too contradictory, or not sufficiently obvious and clearly explained, to be maintained in continual succession, during a series of ages, emphatically styled the *dark ages*—a period of the most consummate ignorance and barbarism. The system of Pythagoras was, however, adopted and retained, until Plato, Aristotle, and the philosophers that came after them, embraced the vulgar idea, or what was afterwards called the Ptolemaic* system; and their authority imposed it upon mankind, till the doctrine which had been taught by Pythagoras more than 2000 years before, and which had been rejected and in a great measure become lost or extinct, was revived about the year 1510, by the genius of Nicholas Copernicus, an eminent astronomer, born at Thorn, in Prussia, A. D. 1473; from whom it has been denominated the *Copernican System.* Copernicus having adopted and greatly improved the Pythagorean or true system of the universe, published it to the world with new demonstrative arguments in its favour, in his work entitled, *De Revolutionibus Orbium Cœlestium*, first printed at Nuremberg, in 1543, a little previous to his death, which took place in the same year, at the age of seventy. The truth of the ancient Pythagorean system, by applying mathematical reasoning to mechanical experiments, was afterwards completely established by the incomparable *Sir Isaac Newton.*

VARIATIONS OF THE SEASONS.

It is the inclination of the axis of the earth, to the plane or level of its orbit, that occasions the variations of the seasons.

It is easy to be shown, that the alternate succession of day and night is produced by the rotation of the earth upon its axis; but the different lengths of days and nights in every part of the world, in the course of the year, and the phenomena of the different seasons, or the changes of heat and cold, Summer and Winter, Spring and Autumn, are occasioned by the annual revolution of the Earth about the Sun, in the plane of the ecliptic.

During one half of the year, the north pole is continually illuminated by the Sun, and the South pole is all the time in darkness; and during the other half of the year, the South pole is constantly in the light, and the north pole is in darkness; and other parts in a proportional degree partake of this vicissitude, and create the variety of the seasons.

The difference in the degrees of heat, is chiefly owing to the different heights, which the Sun attains above the horizon, and the different length of the days. In summer the Sun appears nearest the zenith, and its rays falling nearly perpendicularly, more of them fall on any given

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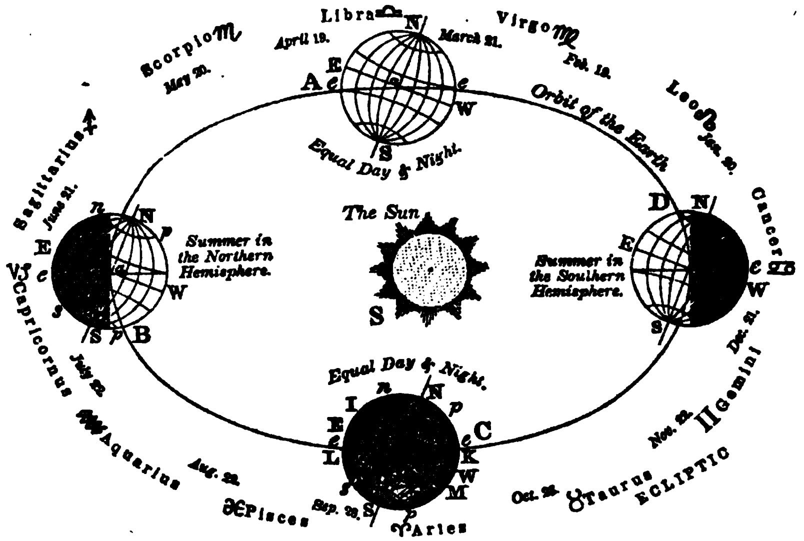
* For the Ptolemaic and Tychonic Systems, See Vol. 1. p. 92 Fam. Magazine.



VARIATIONS OF THE SEASONS.

portion of the Earth's surface, and therefore produce a greater heat than in winter, when the Sun is nearer the horizon and its rays fall obliquely. When the days are long, and the nights short, the earth and air are more heated in the day than they are cooled in the night, and the reverse when the days are short and the nights long.

In the figure given above let the inner circle or rather *oval*, represent the orbit of the Earth; S, the Sun in the lower focus of the orbit, the four globes, N. E. S. W. the Earth in different parts of its elliptic orbit, receiving from its changing position the varying seasons, and the succession and different lengths of day and night; N. S. the Earth's axis, N. its north pole, S. its south pole, &c.—The spectator is here supposed to be beyond or without the orbit of the Earth, at a considerable distance, and to look upon it obliquely.

As the Earth revolves round the Sun, according to the order of the letters, A B C D, &c., its axis N. S. keeps the same obliquity, or always preserves its parallelism, it being, in any one part of the orbit, in a position always very nearly parallel to that in which it was, in any other part of its orbit, and its northern extremity always pointing *nearly* towards a fixed star situate immensely beyond the bounds of the solar system, and hence denominated the *North Polar Star*.

We shall now suppose the Earth to set off from its position at the time of the vernal equinox, in the Spring, and to revolve annually round the Sun, S, from the point A, or that part of the orbit in which a spectator in the Sun, would see the Earth coincide with the beginning of the sign *Libra*, of the ecliptic, and the inhabitants of the Earth see the Sun in the direction of *Aries*, or when the Sun, as seen from the Earth, appears to enter Aries. In this position of the Earth, about the 20th of March, the axis, though inclined to the plain of the orbit, is not inclined towards the Sun, the rays of which for a short time illuminate both hemispheres alike, from one pole to the other, causing an equal length of day and night in all parts of the world. At this time, which is called the *Vernal Equinox*, the rays of the Sun fall perpendicularly on the terrestrial equator, and more or less obliquely on places more or less remote from the equator.

As the Earth proceeds in its orbit, according to the order of the signs, and passes from *Libra*, along the signs *Scorpio* and *Sagittarius*, to *Capricornus*, the Sun is seen to advance from the west towards the east, along the signs, *Aries*, *Taurus*, and *Gemini*, to *Cancer;* until in about three months, that is to say, on the 21st of June, the Earth will arrive at the beginning of *Capricorn*, and the Sun, as seen from the Earth, will appear at the beginning of *Cancer*. Here the north pole, in consequence of the obliquity of the axis, becomes eventually so inclined towards the Sun, that a considerable space round that pole becomes illuminated by the solar light, and an equal space round the south pole is in the shade, in consequence of being turned from the Sun. At this time, which is our *Summer Solstice*, the solar rays fall obliquely on the equator, and perpendicularly on a parallel of latitude about 23° 28′ north of the equator, that is, on the Tropic of Cancer. The space then illuminated round the north pole, and that in obscurity about the south pole, extend also to the distance of about 23° 28′ from each pole.

After this the days begin to shorten in the northern parts of the world, and the nights lengthen, in proportion, as the Earth continues its course along the signs, *Capricornus*, *Aquarius*, and *Pisces*, at the same time that the Sun is seen to advance along the signs, *Cancer*, *Leo*, and *Virgo*, the Earth, in its annual revolution, advancing towards the first point of *Aries*, at which it arrives on the 23d of September, when the Sun, as seen from the Earth, appears at the beginning of *Libra;* and at this time, which is the *Autumnal Equinox*, the same conditions occur as when the Earth is in the opposite part of its orbit, at the vernal equinox.

If we now follow the Earth through the other half of its orbit, we shall find, that exactly the same effects take place in the southern hemisphere, while the Earth is percurring that half of its orbit, as what have been just remarked with respect to the northern hemisphere, while the Earth was passing from A through B to C. When the Earth arrives at D, about the 22d of December, the time of our *Winter Solstice*, the north pole is involved in obscurity, and a space round the south pole becomes enlightened to the distance of about 23° 28′ every way from that pole; and then the solar rays fall perpendicularly on the Tropick of Capricorn, the parallel of latitude 23° 28′ south of the equator.

Thus we see, that from *March* to *September*, or while the Earth is moving from *Libra* through *Capricorn* to *Aries*, the north pole is inclined towards the Sun, so that the rays of light fall most directly on the northern hemisphere, producing summer in the northern parts of the world; the north pole remaining all that time in the illuminated hemisphere, will therefore have six months of continual day;—at the same time that the south pole is turned from the Sun, which then shines very obliquely on all those parts of the southern hemisphere which are enlightened by the Sun, thus producing winter in that hemisphere. But during the other half of the year, from *September* to *March*, while the Earth is moving from *Aries* through *Cancer* to *Libra*, the north pole is turned from the Sun, and therefore in darkness, while the south pole is presented more directly to that luminary; and the inhabitants of the southern hemisphere are cheered with summer, while those of the northern hemisphere are chilled with winter. Hence it is easy to perceive, that the inhabitants of the southern hemisphere have the same vicissitudes with those of the northern hemisphere, though not at the same time, it being winter in one hemisphere when it is summer in the other. In this way, the two hemispheres always have opposite seasons at the same time.

The inclination of the Earth's axis to the plane of the ecliptic, also causes a variation in the days and nights in different parts of the Earth's surface, and in different seasons of the year; that at the equator the days and nights are equal, as they always are, and the Sun rises and sets at *six o'clock* throughout the year; that, about the 20th of *March*, and the 23d of *September*, which are the periods of the equinoxes, the days are equal to the nights in all parts of the world; every part of the Earth's surface coming into the light at six in the morning, and going into the dark at six in the evening.

NATURAL HISTORY.

The classification of animals is founded upon a knowledge as well of their most obvious characteristicks, as of their more intimate nature and corresponding points. According to their degrees of similarity, they have been separated and connected together, in various divisions and subdivisions. Each sort of animal, constitutes a distinct SPECIES; a number of species taken together form a GENUS; those genera, which have important and well defined points of resemblance in structure and conformation, are placed together in an ORDER; whilst upon a similar principle, but more extensive in its application, these orders are marshalled into separate CLASSES.

Who is entitled to the credit of having first originated the idea of classifying animals, and what are the comparative merits of the several systems which have been since proposed, we have shown in our first volume. Cuvier's system* is, we believe, almost universally admitted to be the most accurate, definite, and philosophical of any yet proposed. There can hardly be any question of its superiority, or of its ultimately superseding those of all other naturalists. We shall adopt his system generally, taking advantage of others in whatever points they may be more approved.

In a general view, the whole series of animals, from the most insignificant worm up to man, may be arranged, in the first place, into two grand divisions.

1. VERTEBRAL.
2. INVERTEBRAL.

Vertebral animals are possessed of an internal skeleton, or a system of bones covered by flesh, which gives form and strength to their whole fabrick. They have likewise a *cranium* or skull, which contains the brain; and a number of bones called vertebræ, so connected together, as to form a column, known as the spine, back bone, or vertebral column. This column seems to be the main pillar or support of the whole skeleton; and as this forms a striking characteristick common to all these animals, they are hence called VERTEBRAL animals.

INVERTEBRAL animals have no such skeleton, and of course, no vertebral column; but consist of a collection of organs more or less distinct, without any solid basis, and are generally of a soft, yielding texture, though sometimes protected externally by a shell or other hard covering. The brain and nervous system are less distinct than those of vertebral animals, and are unprotected by any bony covering. They are called invertebral amimals, because they have no vertebræ.

The first division may be subdivided into, 1, *warm-blooded*, and 2, *cold-blooded* animals. The warm-blooded animals have all a temperature above that of the element in which they reside. Among these are man, quadrupeds, whales and birds. The cold-blooded, among which are included frogs, toads, lizards, serpents and fishes, have a temperature varying but little from that of the air or water in which they live. We experience a sensation of cold, when we touch them, and hence we call them cold-blooded.

And again, warm-blooded animals may be divided into two classes. 1. Mammalia, or those which produce their young alive, and nourish them by their own milk, from organs called mammæ, or breasts. 2. Birds, or those which produce their young by means of eggs, which they hatch by the heat of their bodies.

The cold-blooded vertebral animals also form two classes. 1. Reptiles, or those which breathe air only. 2. Fishes, or those which breathe through the medium of water.

The second grand division is not capable of so accurate an arrangement. But according to our present knowledge of the characteristicks of the animals, which are included in this division, we may arrange them into five classes. 1. Insects, which may be arranged into extremely numerous orders, genera and species. 2. Crustacea, as the lobster, crab, crawfish, &c. 3. Mollusca, as the snail, squid, oyster, clam, &c. 4. Vermes, as the earth-worm, and leech. 5. Zoophytes, as the star-fish, sea-anemone, the polypus, sponges, and animalcules.

We have then *two* grand divisions, and *nine* distinct classes.

I. *Vertebral Animals.*

1. Mammalia, } Warm-blooded.
2. Birds, }
3. Reptiles, } Cold-blooded.
4. Fishes, }

II. *Invertebral Animals.*

5. Insects,
6. Crustacea,
7. Mollusca,
8. Vermes,
9. Zoophytes.

We shall proceed to consider that class which stands at the head of the animal kingdom, or,

Class I. *Mammalia.*

The foundation of this classification seems very apparent. It is to be found in the very considerable similarity which exists, in the general anatomical conformation of all the animals of this class. The similarity in the production and treatment of their young—in their adaptation and confinement generally to the surface of the earth. But few animals of this class are capable of mounting in the air, as the bats; the number of those is also few, which can subsist in the water, as the whales.

Upon a consideration of the differences in the anterior extremities—in the feet—in the teeth, and in the skin of the animals of this class, their division into orders is founded. We can judge of the character, mode of life, and food of an animal by his structure. In consideration of these differences in the conformation of particular parts, and upon the differences in their particular modes of life, we find it convenient to arrange the class Mammalia into *nine* distinct orders.

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* "The principles on which M. Cuvier's divisions rest will necessarily preside over all the changes which still more extended observation will render indispensable; but the basis of zoological classification is for ever laid, and its solidity will prove better than all the discourses of future naturalists, the elevated genius of the author."—*Laurillard.*

1. The *Bimana* or *two-handed* animals.
2. The *Quadrumana* or *four-handed* animals.
3. The *Carnivora* or *carnivorous* animals.
4. The *Rodentia* or *gnawers.*
5. The *Edentata* or *toothless* animals.
6. The *Ruminantia* or *ruminating* animals.
7. The *Pachydermata* or *thick-skinned* animals.
8. The *Cetacea* or animals of the *whale kind.*
9. The *Marsupialia* or *pouch-bearing* animals.

I. Bimana. Man, is the only individual of this order. The reasons for placing him in a distinct order from the *four-handed* animals, are so apparent, that we do not consider it necessary to enter into an explanation of them now. We have particularly described Man—the different races, and their distinguishing attributes in our first volume, pages 20 and 28, *et passim.*

II. Quadrumana. In the internal and external structure of the animals of this order, there is a nearer approach to man than in any other animals. They differ, however, in the size and shape of the head; in the conformation of the face; in the length of the forearm; in the construction of the lower extremities; in their motions and posture, and in their modes of life. This order comprehends a numerous tribe, and a great variety of species, known under the names of apes, monkeys, baboons, &c. These names though generally applied with little discrimination, are intended to express actual differences. Thus the apes have no tail; that of the monkies is about the length of their bodies; and that of the baboons a very short one. Besides these, there are the sapajous, a species having long, and what are called prehensile tails. Their tails are so constructed as to answer in some measure the purpose of a fifth limb, enabling them to cling to the branches of trees, and assisting them in climbing. As the leading character under the order quadrumana we commence with

THE ORAN-OTANG.

"Oran-otang is the name this animal bears in the East Indies; *Pongo*, its denomination at Loando, a province of Congo; and Kukurlacks in some parts of the East Indies. We shall present the Oran-otang and the Jocko together, because they are, possibly, but one and the same species. We have seen the small Oran-otang, or the Jocko, alive, and we have preserved its skin, but we can only speak of the Pongo, or great Oran-otang, from the accounts travellers have given us of it. Battel assures us, 'that, excepting his size, the Pongo is exactly like that of a man in all his proportions: he is as tall (he says) as a giant: his face is like that of a man, the eyes deep sunk in the head, the hair on each side extremely long, the visage naked and without hair, as are also the ears and the hands; the body is lightly covered and scarcely differing from that of a man, except that there are no calves to the legs. Still, however, the animal is seen to walk on his hinder legs: he sleeps under trees, and builds himself a hut, which serves to protect him against the sun and the rains of the tropical climates, of which he is a native; he lives only upon fruits, and is not carnivorous: he cannot speak, although furnished with greater instinct than any other animal of the brute creation. When the Negroes make a fire in the woods, this animal comes near and warms himself by the blaze, he has not, however, skill enough to keep the flame alive by feeding it with fuel. They go together in companies, and if they happen to meet with one of the human species, remote from succour, they show him no mercy. They even attack the elephant, which they beat with their clubs, and oblige to leave that part of the forest which they claim as their own. It is impossible to take any of these creatures alive, they are so strong. None of this kind therefore, are taken except when very young, and then but rarely, when the female happens to leave them behind; for, in general, they cling to the breast, and adhere both with legs and arms. There are two kinds of this animal, both very much resembling the human race, the Pongo, which is taller and thicker than a man; and the Jocko, whose size is much smaller,' &c. 'The Apes of Guinea (says Bosman,) which are called *Smitten* by the Flemings, are of a brown colour, and grow to a very large size. I have seen some above five feet tall: these Apes are of a very disagreeable appearance, as well as those of another kind, which resemble them in every particular, excepting in size, which is a fourth part less than that of the former: they are very easily taught to do almost whatever their masters please.' Schouten says, 'That the animals which the Indians call Oran-otangs, are almost all of the same height and shape as mankind, but that their back and loins are covered with hair, of which, however, there is a deficiency in the fore part of the body; that the females have two breasts; that the face is rough, the nose flat, and the ears like those of a man; that they are robust, active, bold, and defend themselves even against armed men; that they are passionately fond of women, and that there is no safety in passing through the woods they inhabit, as these animals immediately attack and injure them.' To these testimonies we may add that of M. de la Bresse, mentioned in his Voyage to Angola. This traveller assures us, 'that the Oran-otangs, which he calls *Quimpeazes*, often attempt to surprise the female negroes, which they keep with them for the pleasure of their company, feeding them very plentifully all the time. I knew (says he) a woman of Loando that had lived among these animals for three years. They grow from six to seven feet high, and are of unequalled strength. They build sheds, and make use of clubs for their defence: their faces are broad, their noses flat, their ears without a tip, their skins are fairer than that of a Mulatto, but they are covered on many parts of

their body with long and tawny coloured hair: their belly is extremely large, their heels flat, and yet rising behind about half an inch: they sometimes walk upright, and sometimes upon all fours when they are fantastically disposed. We purchased two of these animals, one about fourteen months old, which was a male, and a female about twelve months.'

"The Oran-otang which I saw, walked always upright, even when it carried heavy burdens. Its air was melancholy, its deportment grave, its nature more gentle and very different from that of other apes. Unlike the baboon, or the monkey, whose motions are violent, and appetites capricious, who are fond of mischief, and only obedient through fear, a look was sufficient to keep it in awe. I have seen it give its hand to show the company to the door, that came to see it, and it would walk about gravely with them, as if one of the society. I have seen it sit at table, unfold its napkin, wipe its lips, make use of the spoon and the fork to carry the victuals to its mouth, pour out its drink into a glass, touch glasses when invited, take a cup and saucer and lay them on the table, put in sugar, pour out its tea, leave it to cool before drinking, and all this without any other instigation than the signs or the command of its master, and often of its own accord. It was gentle and inoffensive: it even approached strangers with respect, and came rather to receive caresses than to offer injuries: it ate almost of every thing that was offered to it, but it preferred dry and ripe fruits to all other aliments. It would drink wine, but in small quantities, and willingly left it for milk, or any other sweet liquor. Mr. L. Brosse, who bought two young ones that were but a year old, from a negro, relates that, 'even at that age, they sat at table, ate of every thing without distinction, made use of their knife, spoon and fork, both to eat their meat and help themselves; they drank wine and other liquors. We carried them on shipboard, and when they were at table, they made signs to the cabin-boys, expressive of their wants; and whenever they neglected attending upon them as they desired, they instantly flew into a passion, seized them by the arm, bit them and kept them down. The male was seasick, and required attendance like a human creature: he was even twice bled in the right arm; and every time afterwards when he found himself indisposed, he showed his arm, as desirous of being relieved by bleeding.'

"Henry Grose relates, 'that these animals are met with to the north of Coromandel; that Mr. Horne governour of Bombay, had two of them sent him, a male and a female; they were scarcely two feet high, but their form was entirely like the human: they walked erect upon their two feet, and were of a pale colour, without any hairs on any other part than where mankind generally have them; their actions perfectly resembled the human, and their melancholy plainly evinced how strongly they felt the weight of their captivity: they made their bed very carefully in the cage in which they were sent on board the ship. When any person looked at them, they hid those parts with their hands, which modesty forbids the sight of. The female (adds he) died on board, and the male showed all real signs of grief, and took the death of his companion so greatly to heart, that he refused his food, and did not survive her more than two days.'

"Francis Pyrad relates, 'that in the province of Sierra Leona, in Africa, there are a kind of apes called *Barris*, which are strong and muscular, and so very industrious, that, if properly fed and instructed when young, they serve as very useful domesticks: they usually walk upright, will pound at the mortar, fetch water from the river in a little pitcher, which they carry on their heads; but, if care be not taken to receive the pitcher at their return, they let it fall to the ground, and then seeing it broken, they begin to lament and cry for the loss.'

"The Jocko is known by the name of the Chimpanzee. It is the Simia Troglodytes of Linnæus. From the Oran it differs only in colour and stature; the former being dark, brown, or blackish, and the latter not exceeding two feet and a half or three feet. It is a native of Angola, Sierra Leone, and some parts of Asia.

"Mr. M‘Leod gives the following description of an Oran-otang which was brought to England, from Borneo, in 1816, on board the Alceste, when the embassy was returning from its fruitless mission to China:—'The Oran-otang, also a native of Borneo (says he) is an animal remarkable not only from being extremely rare, but as possessing, in many respects, a strong resemblance to man. What is technically denominated the cranium is perfectly human in its appearance; the shape of the upper part of the head, the forehead, the eyes (which are dark and full,) the eyelashes, and, indeed, every thing relating to the eyes and ears, differing in no respect from man. The hair of his head, however, is merely the same which covers his body generally. The nose is very flat, the distance between it and the mouth considerable; the chin, and in fact the whole of the lower jaw, is very large, and his teeth, twenty-six in number, are strong. The lower part of his face is what may be termed an ugly or caricature likeness of the human countenance. The position of the scapulæ, or shoulderblades, the general form of the shoulders and breasts, as well as the figure of the arms, the elbow joint especially, and the hands, strongly continue the resemblance. The metacarpal, or that part of the hand immediately above the fingers, is somewhat elongated; and, by the thumb being thrown a little higher up, nature seems to have adapted the hand to his mode of life, and given him the power of grasping more effectually the branches of trees.'

"He is corpulent about the abdomen, or, in common phrase, rather pot-bellied, looking like one of those figures of Bacchus often seen riding on casks: but whether this is his natural appearance when wild, or acquired since his introduction into new society, and by indulging in a high style of living, it is difficult to determine.

"His thighs and legs are short and bandy, the ankle and heel like the human; but the fore part of the foot is composed of toes, as long and as pliable as his fingers, with a thumb a little situated before the inner ankle; this conformation enabling him to hold equally fast with his feet as with his hands. When he stands erect, he is about three feet high, and he can walk when led like a child, but his natural locomotion, when on a plain surface, is supporting himself along, at every step, by placing the knuckles of his hands upon the ground. All the fingers, both of the hands and feet, have nails exactly like the human race, except the thumb of the foot, which is without any.

"His natural food would appear to be all kinds of fruits and nuts, but he eats biscuit, or any other sort of bread, and sometimes animal food. He will drink grog, or even spirits, if given to him; and has been known repeatedly to help himself in this way: he was also taught to sip his tea or coffee, and, since his arrival in England, has discovered a taste for a pot of porter His usual conduct is not mischievous and chattering, like that of monkeys in general: but he has rather a grave and sedate character, and is much inclined to be social, and on good terms with every body. He made no difficulty, however, when cold, or inclined to sleep, in supplying himself with any jacket he found hanging about, or in stealing a pillow from a hammock in order to be more soft and comfortable.

"Sometimes, when teased by showing him something to eat, he would display in a very strong manner the human passions, following the person whining and crying, throwing himself off on his back, and rolling about apparently in a great rage, attempting to bite those near him, and frequently lowering himself by a rope over the ships's side, as if pretending to drown himself; but, when he came near the water's edge, he always reconsidered the matter, and came on board again. He would often rifle and examine the pockets of his friends in quest of nuts and biscuits, which they sometimes carried for him. He had a great antipathy to the smaller tribe of monkeys, and would throw them overboard if he could; but in his general habits and disposition there is much docility and good nature, and when not annoyed he is extremely inoffensive. He approaches, upon the whole, nearer to the human kind than any other animal.'

"An enormous Oran-otang, of the height of seven feet, and of a proportionate bulk, was, after many attempts, killed under a tree, from which it had fallen, in consequence of several bullet wounds, at Ramboon, on the western coast of Sumatra; having, as is supposed, wandered from the large and almost impenetrable forest, situated about two days' journey inland. The skin of this extraordinary creature is preserved in the museum of the Asiatic Society of Calcutta; it is of a dark leaden colour, covered, unequally, with brownish red, shaggy and glossy hair, which is long on the flanks and shoulders. The head was well proportioned to the body, the nose prominent, the eyes large, and the mouth rather larger in proportion than that of man; the chin was fringed with a curling beard, reaching from ear to ear, and the visage by no means disgusting. His chest was wide and expanding, and waist rather slender: his legs rather short, as compared with his arms; the feet and hands had very nearly the human form, except that the thumbs were smaller, and situated higher towards the wrists, than in man. His walk was erect, but waddling, and not quick, unless when his hands were used to assist, or a branch of a tree, to push himself along, his chief agility being shown in climbing trees, and springing from branch to branch, when pursued. The perfect state of his teeth showed that he was young, and in full vigour. He was without any vestige of a tail.

THE GIBBON OR LONG-ARMED APE.

"This animal always keeps its erect posture, even when it walks on all fours, its arms being as long as its body and legs put together. We have seen one of these animals alive; it was but young, and not then more than three feet high; though we must presume that it had not attained its full size, but that when it is adult, and in its free state, it is at least four feet. It had no appearance of any tail; it had a circle of gray, bushy hair all round the face, which gave it a very remarkable appearance: its eyes were large and sunk in its head, its face resembling that of a man, tanned, and its ears well-proportioned. This Ape appeared to us to be of a gentle and tractable disposition; its motions were neither rash nor precipitate. It was fed on bread, fruit, almonds, &c., and calmly received the food that was presented to it; it was very averse to cold and wet weather, and did not live long after being brought from its native country. It is a native of the East Indies, and particularly found along the coasts of Coromandel, Malacca, and the Molucca Islands."

GEOGRAPHY.

OUTLINES OF ITS HISTORY.

Moses and Homer in presenting a picture of two of the most ancient nations, probably give us the first geographical writings, and therefore may merit to be called the fathers of geography. Soon after them, the Phœnicians became geographers in practice, by traversing the Mediterranean by the light of the stars, and discovering the Atlantic Ocean. Herodotus becomes an extensive traveller, and relates to the Greeks what he has seen and heard, concerning different nations and countries. Carthage arises, and her extensive colonial system, with the adventurous voyages of Pytheas of Marseilles, bring the western world into view, and create conjectures respecting the north. The military campaigns of Alexander throw a brilliant light on the countries of the east. Then among the Romans, Eratosthenes, Strabo, Pliny and Ptolemy, arrange the still obscure and incomplete materials into a system. When we get to this point, the system of "Ancient Geography" is formed; and here it terminates. Next comes the great migration of nations; and all is chaos and confusion till the elements of a new geography are formed, with the rise of Modern Europe. The spirit of travelling revives. It conducts the Arabs to the Moluccas, and it is said the Scandinavians to America. But these people travelled without science, and without profit. The magnetick needle is then discovered; and the Italians and Portuguese begin to navigate the sea with confidence. The horizon of geography extends; new light dissipates errour and prejudice, and the people of the earth begin to open their eyes to the contemplation and the true nature and dimensions of their planet. And now the adventurous and immortal Columbus, who taught affected wisdom not to judge without knowledge, conducts us triumphantly to a new world. After this glorious period, every nation enters emulously on the career of exploring and discovery:—bold and persevering adventure conducts us around the world; and the united efforts of nations continue to add new light, untill nearly the whole vast theatre of the globe, is developed to the understandings of men, and the gaze of science.

Definition. The term Geography* literally signifies a description of the earth. In a description of the earth, we mean to comprehend a description of the whole terraqueous globe: its figure; the laws which affect it as a celestial body, and its relations to other celestial bodies; its dimensions, and its motions; its composition; its external configuration of mountains, valleys, plains, and coasts; its divisions into land and water, and the forms and distribution of continents and seas; its productions and its inhabitants.

To the mind of man, who is lord of these dominions, which it is the object of Geography to describe, what a grand field of study and of interest is opened! what an opportunity to contemplate, for enduring and profitable results, those beautiful systems of the creation which strike one with admiring awe! What a splendid cabinet of curiosities does it open to the studious mind, desirous of acquainting itself with the secrets of the globe and the mysteries of Nature! And let us inquire with Malte Brun, "is not geography the sister and the rival of history? If the one enjoys the empire of universal time, does not the other rightfully claim that of place? If the one has the power of recalling past generations, should not the other exert that of fixing in one scene the shifting pictures of history, by delineating to the mind the permanent theatre of the poor and brief transactions of mankind, strewed with the wrecks of numerous empires; and describe the course of nature, constantly occupied in repairing, by its beneficial operation, the ravages arising from human discord? Does not a description of the globe intimately connect itself with the study of human nature, human manners, and human institutions? Does it not offer information of the utmost importance to the political sciences? Is not this department always brought fully into view before a complete form can be given to any branch of Natural History? And does it not supply literature with a boundless treasure of feelings and of images?"

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* Compounded of two Greek words *γη* the earth, and *γραφω* to write.

With such considerations we shall proceed to the task of searching into, and illustrating this vast and interesting science with alacrity. We find at the outset, that it is obviously susceptible of three divisions; and in fact, we find it necessary, in order to a complete and plain system of universal Geography, to institute three distinct departments, viz: Mathematical, Physical, and Political Geography.

In the first is included the contemplation of the figure, size, and motions of our planet; its relation to other planets; latitudes and longitudes; the measurement of time, and the construction of globes and maps. In this department of geography, we obtain the requisite information and assistance from astronomy, and geometry.

Physical Geography delineates all the leading features of nature; the mountains which diversify the surface of the land, and the seas which bound its outline; the valleys, the rivers, the caverns, the mines, and the volcanoes; the motions of the atmosphere, and the laws of temperature; and lastly, the distribution into their native regions of the animals, the plants, and all the beings that are nourished in the exhaustless bosom of the earth. Here we bring to our use the light of chymistry, and the discoveries of Natural History.

Political Geography comprehends the classification of the human species; the particular description of countries, cantons, cities and towns; population, religion, government, institutions, manners, customs, arts, trade, commerce, and whatever may be enumerated under the head of statisticks. In this branch of the science we abstract our materials from chorography and topography, and the statements and testimony of travellers and exploraters.

But the principles of Mathematical and Physical Geography are fixed and immutable; they are founded on demonstrative evidence and mathematical truths, which have been the same and always will be the same as far as we know in all ages. So that the oldest Geography with calculations once correct, in so far as the mathematical and physical principles are concerned, would be as good as the latest. Widely different is the case with respect to Political Geography. That of a few years back may be no better than an old directory, pointing out people and places which perhaps have changed or no longer exist. The nations which it described may have become extinct, the kingdoms destroyed, the cities laid in ruins, and all traces of their former existence entirely effaced. Such are the vicissitudes of human life, and the instability of human institutions! We shall proceed to the consideration of

MATHEMATICAL GEOGRAPHY.

The figure of the earth is manifestly the first subject for inquiry;—for the principles by which we may ascertain the various truths that lie within the scope of mathematical geography, are altogether different, on the different suppositions of the earth being a flat circular plain, a cylinder, or a sphere.

A great variety of appearances, both on the surface of the earth and in the heavens, (which will be described presently) prove conclusively, that the earth is a spherical or round body. The possession of this important truth enables the geographer, by the application of the known mathematical properties of the sphere, to solve many interesting problems, the most useful of which is to determine the relative situation of places upon the earth's surface. For this and some other practical purposes, the earth is taken to be a perfect sphere; and although this supposition be not strictly true, it is sufficiently near the truth to be adopted without sensible errour in the investigations into which it is commonly introduced. The nature and quantity of its deviation from a perfectly spherical shape will be for future inquiry.

At what particular period of the world the spherical figure of the earth was first discovered, cannot now be ascertained. It is natural to suppose, that the curiosity of mankind would early be directed to the shape of the earth they lived upon. But when first it engaged their attention, it fared with this as with all other parts of what is called natural philosophy. Men were led to entertain the most erroneous notions of it, by trusting too much to single appearances. Deceived by the plain-like appearance of the earth, and disregarding all other circumstances indicative of its figure, they conceived it to be an extensive plain meeting the heavens on every side. Such was, for ages, the general opinion. But there were exceptions to the prevailing ignorance, which are honourable testimonies to the value of a more enlarged and extended observation of nature. The Egyptians and Chaldeans are especially entitled to this praise. The philosophers of these nations were, in all probability, led to form a correct opinion of the figure of the earth from their great practical familiarity with the appearances of the heavenly bodies. But whatever may have been the source from whence their knowledge was derived, it is manifest that they were not ignorant of its true shape, as it must have formed an element in the calculations by which they were enabled to predict eclipses of the moon. From the Egyptians and Chaldeans, who were the fathers as well of geographical as of astronomical science, the Greek philosophers, with all their most correct notions in natural philosophy, derived also their knowledge of the Earth's true shape. But (as *Sir Isaac Newton* remarks) the Greeks were of themselves more addicted to the study of philology (or language) than of nature: when therefore their communications with Egypt became less frequent, the ancient philosophy gradually declined among them; and no longer retaining the just ideas they once possessed, they put forth their own visionary speculations concerning the figure of the earth. Aristotle, the most celebrated of the Greek philosophers, did not escape the errour of those who allow the suggestions of fancy to occupy the place of a severe investigation into facts; and we find him alleging the earth to be of a cylindrical shape, like a common drum. The remarkable ingeniousness of the Greeks was ever impatient of the restraint which scientifick inquiry in order to a successful issue imposes upon the mind; and it is to be lamented that by reason of the admiration in which their writings were held, their errours should for so long have retained possession of the human mind, and by keeping down the spirit of inquiry retarded the full establishment of what is properly called experimental philosophy.

During the greater part of that portion of the history of Europe, called the middle or dark ages, the earth was conceived to be a flat surface extending on every side till it met the heavens. The overthrow of this popular opinion was rendered the more difficult by the Roman church admitting it into the number of articles of faith: the tenet thus became guarded with the sanction of religious belief, and by the apprehension of incurring the serious charge of heretical opinions. It is however remarkable, that the appearance of objects at sea, which are wholly inconsistent with the notion of the earth being a plain, and which lead most directly to the conclusion of its spherical shape, should not have redeemed the Venetians and Genoese, who had long been in the habit of making adventurous sea voyages, from the general ignorance. But notwithstanding the peculiar advantages enjoyed by navigators, it is evident that the best of those of the age of Columbus were not better informed of the earth's real figure. It is related as a matter of history, that the Portuguese who had arrived at the Moluccas (situated in the Pacific and to the West of America,) by sailing continually in an *easterly* direction, were astonished by the appearance of Magellan's party, who reached the same point by sailing continually *west*. We may not, however, involve Columbus in this general censure; to him is properly due the glory of establishing the fact that the earth is a sphere. He was indeed eminently qualified to give a new direction to the current of opinion. In advance of the age he lived in by the extent and correctness of his information, and being at once bold in enterprise, enthusiastick in pursuit, and fertile in expedients, he possessed all the characteristicks of one who is destined to overthrow a great and prevailing errour. His persuasion that the earth was a sphere, furnished him with the happy idea of arriving at the *East* Indies by a shorter course than round the Cape of Good Hope, by sailing due *West*. He failed in his undertaking, having been misled by the errour of the ancient geographers. Ptolemy's map was then in use, and the East Indies are there laid down considerably to the west of their true position. The western coast of India is by Ptolemy placed in longitude 165° east from the isle of Ferro, (one of the Canaries through which the first meridian passed,) whereas the true longitude is about 96°, thus making a difference of no less than 67°. The reasoning of Columbus was therefore right; and although he was disappointed of the immediate object of his voyage, he became the discoverer of a new world, and eventually established his own opinion of the earth's spherical shape. Magellan was the first navigator who practically demonstrated the roundness of the earth; following up the opinions which Columbus among the moderns had the merit of originating, he sailed upon the project of reaching the Moluccas by a westerly passage; but being killed in the Philippine Islands by the natives, he did not complete the entire voyage round the world. Sir Francis Drake was the first person who in one voyage circumnavigated the globe; he accomplished the voyage (undertaken however solely for purposes of plunder, and marked by rapine and bloodshed) in the space of three years; and returned to England in 1560. After these voyages, the spherical figure of the earth was generally admitted by the philosophers of Europe. A spirit of investigation soon after arose, and furnished an abundance of satisfactory proofs, which, though of daily or frequent occurrence, had hitherto been unobserved or unheeded. These proofs consist in certain remarkable appearances, either of objects upon the surface of the earth itself, or of the heavenly bodies. They are of the following description:—

If a person were situated upon an open and extensive plain, he would find, that as he departed from objects, the view of which was not hindered by any unevenness in the plain, they would *gradually* disappear from their *base* upwards; in like manner, the hull of a ship proceeding out to sea becomes invisible *first*, and afterwards the masts and rigging. The *order* in which the parts of these objects successively disappear, cannot be explained by the mere supposition that the distance between the object and the spectator gradually increasing, the object becomes first indistinct, and at last invisible; because with respect to bodies whose bulk is the same from the top to the bottom, this reason is applicable to all the parts alike, and would not account for the highest part of them being always the last visible; and with respect to bodies, the bottom part of which is the largest (as in the case of a ship,) it would not only be insufficient to explain the fact, but would be directly contrary to experience, by which we are taught, that where distance alone is the cause of a body becoming first indistinct and then invisible, the larger and more bulky parts of it are seen the longest. The only supposition which can account for the *order* in which the parts of an object disappear is, that the surface of the earth is *continually and gradually* bending or curving downwards—in other words, that it is a convex surface; and the circumstance that these appearances are the same both in kind and degree all over the earth, and in whatever direction the spectator moves from the object, or the object from the spectator, proves that this convex surface is every where and in all directions precisely or very nearly the same, and consequently that the earth is a sphere.

The voyages of Magellan and Drake, of Anson, Cook, and Vancouver, all tend to establish the same fact; for by holding a course due west or due east, these navigators have at last arrived at the point of their departure—thus they have sailed upon a line which in one revolution returns into itself, ending where it began; and, therefore, the surface on which it was described must be a sphere, or resembling a sphere: this was further confirmed by the voyages of Captain Cook towards the South pole, from which it appeared that the course round the earth gradually diminished as it approached the pole.

The proofs derived from the appearances of heavenly bodies are even more conclusive than the foregoing. By travelling on the earth's surface from the north towards the south, a certain star in the heavens, called the pole star (which is itself almost stationary,) is observed to change its place in the heavens relatively to the spectator's horizon, and gradually *to descend;* by a movement of the spectator in the opposite direction (from south to north,) the height of the same star above the horizon is observed gradually to *increase;* and in both cases this apparent change of place in the star is in proportion to the distance travelled over. This change being also observed from whatever place the movement is made (supposing it to be in a direction perpendicular to the equator or on a meridian line,) cannot be otherwise accounted for than by the supposition that the earth is a sphere; and that the arc or circular space in the heavens through which the star appears to have moved, corresponds with a similar arc traced upon the surface of the earth.

Another most convincing proof is furnished by the eclipses of the moon. These eclipses are known to be caused by the earth coming between the sun and moon, and intercepting or cutting off the supply of light from the sun which illuminates the moon's surface or disk; the dark part of the moon's disk is, therefore, nothing more than a representation of the earth's shadow at the distance of the moon. In whatever position the earth happens to be at the time of an eclipse, its shadow upon the moon's disk is always in the form of a circle or of part of a circle: the earth must therefore be a sphere, since no other than a spherical body, in every position in which it can be placed with respect to another body giving light, can cast a circular shadow upon a third body. If, however the earth were shaped like a circular flat plain, its shadow upon the moon's disk would be circular only when either of its sides directly faced the moon: if turned edgewise towards the moon, the shadow would be in the form of a streak, and in all other positions it would be more or less elliptical, as the earth happened to be turned more or less obliquely towards the moon when she is eclipsed.

The supposition that the earth is a sphere, accounts for all the appearances we have described; while, on the other hand, the various suppositions which have from time to time been advanced, and which differ from this, are totally inconsistent with one or other of them.

Sir Isaac Newton, in his 'Principles of Natural Philosophy,' has laid it down as a rule (and it is a rule as indisputably just as it is important,) that 'in experimental philosophy we are to look upon propositions collected by general induction from phenomena, as accurately or very nearly true, notwithstanding any contrary hypothesis may be imagined, till such time as other phenomena occur by which they may either be made more accurate or liable to exceptions;' he adds, 'this rule we must follow, that the argument of induction may not be evaded by hypotheses.' Applying this rule to the present subject, we may observe that the objections urged against the conclusion that the earth is spherical, however plausible, are entitled to no weight whatever, unless they are grounded upon some certain facts and natural appearances arising from the figure of the earth, either inconsistent with the present-received theory or which that theory is insufficient to account for.

It is hardly necessary to remark, that the expressions occasionally to be met with in the Bible with regard to the figure of the earth, and which may appear to contradict the foregoing conclusion, have been improperly and very ignorantly applied to this subject. The object of the inspired writers who used them, was not to advance a true system of natural philosophy, or to correct the popular errours of the day in matters of mere science, but to illustrate or enforce some precept or doctrine, or to record the occurrence of some remarkable event, which could not be done intelligibly, but by adopting expressions in agreement with the opinions of the age.

The re-establishment of the old and long neglected opinion of the earth's spherical shape, may justly be regarded as furnishing an epoch in the history of modern ages. When admitted into the number of those truths which are assumed and acted upon without proof, it had an immediate and practical effect upon the common concerns of life. To traverse boundless seas was no longer matter for apprehension: the seaman was now provided with a method of discovering his relative position upon the globe, the course he had already described, and the distance and bearing of his destined port. Navigation thence assumed a bolder and more systematick character; an extensive commerce added to the wealth, and stimulated the efforts of European nations; and the more general and frequent intercourse inseparable from commerce softened the prejudices of men, and opened to them in distant climates and countries the richest and most varied stores of knowledge. We should not perhaps be justified in placing this discovery in the same rank with the other great events which happened about this æra: the invention and general introduction of the art of printing—the reformation—and the establishment of experimental philosophy, must stand alone; but it forms together with them a class of great and brilliant events, which exhibit the human mind as once more in a state of activity, and putting forth all its energies in the attainment of whatever might most conduce to the social and moral improvement of mankind."

PRESIDENT JEFFERSON'S OPINION OF ARDENT SPIRITS.

"The habit of using ardent spirits by men in publick office, has occasioned more injury to the publick service —and more trouble to me than any other circumstance which has occured in the internal concerns of the country, during my administration; and were I to commence my administration again with the knowledge I have acquired from experience, the first question I should ask, with regard to every candidate for publick office, would be, "Is he addicted to the use of ardent spirits?"

"Ten measures of garrulity" says the Talmud, "were sent down upon the earth, and the women took nine."

POETRY.

THE WINDS.—By Mr. Ord.

Harp on, ye winds! in glad content,
Your hymns on every instrument
Of rock, and mount, and cave;
The trees their joyful notes will bring,
Each flower, each blade of grass, will sing
Your measures, glad or grave.

And not to me alone the songs
That to your minstrelsey belongs,
Of joys that never cease;
The lonely spring, the quiet stream,
The lake low murmuring as in dream,
Have heard your hymns of Peace.

The nightingale, in sweetest note,
To you her lone complaint hath brought,
To you each bird hath sung;
The weed-clad tower of ancient time,
The church-bell's solitary chime,
Have join'd your banner'd throng.

Who, who may tell whence ye arise?
In what far region of the skies?
In what high forest tree?
Ye come as rushing hosts of war,
As loosen'd cataracts heard afar,
As thunders of the sea.

Or fanning round the wild bird's wing,
Or by the moon's cold pathways sing
Along the milky way;
Or through fierce caves and arches high,
Where Ruin mocks the morning sky,
Ye woo the love-worn day.

And whence that influence, dark and dim,
That wakes the soul's Æolian hymn
To measures glad and gay?
That breathes unto the midnight hour
Such spell of mystery and power,
And holds monarchick sway?

That makes the Poet weep and sigh,
That gathers tears in Beauty's eye,
And dreams around its head;
That, breathed in sounds of awe and fear,
Doth sing unto crazed lover's ear,
Old songs of maiden dead?

That treadeth where no foot can go,
That murmurs where no fount can flow,
Where no proud pennant streams;
That to the stars and to the moon
Doth ever sing a slumbering tune—
The very Queen of Dreams?

For ever breathed your hymns of love!
Ye called the laurel-seeking dove
Out from the foundering ark;
Ye came to Ruth among the corn,
Singing of distant lands forlorn
Beyond the waters dark.

Ye waved the rushes o'er the brow
Of Moses, when the ladies saw
God's chosen nod his head;
Ye caught the stir of Jordan's sea,
To Israel's king ye sang in glee
Ere Absalom was dead

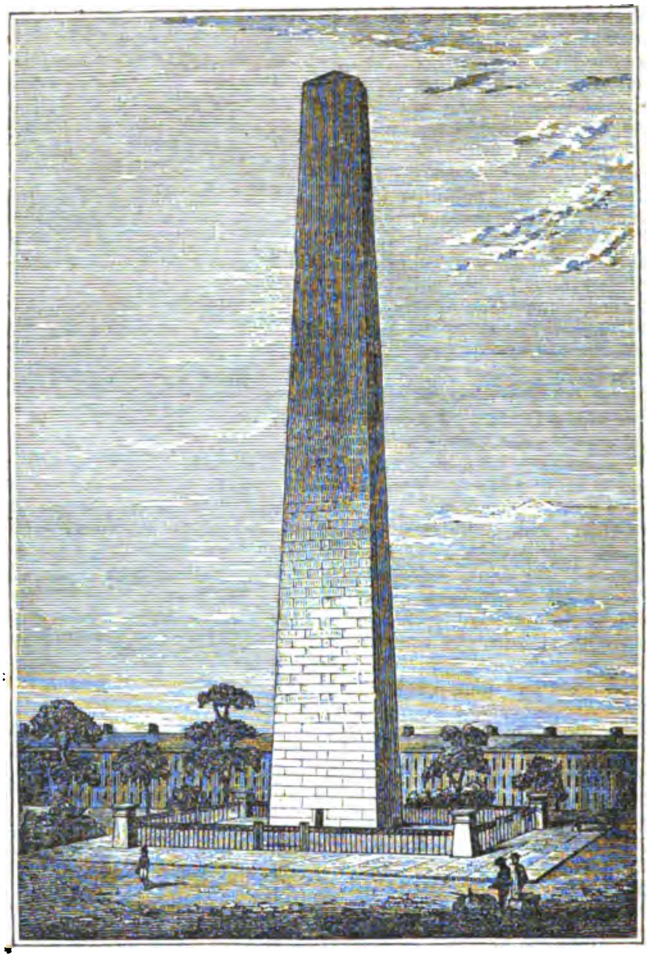
Ye speak to us of human life!
One hour of calm, one hour of strife,
Now bright, now dark your form!
At morn ye sing to tree and flower,
The evening hears your tread of power,
And trembles in the storm.

Ye speak of human life! Ye go,
We know not where—ye have a flow
Wilder than ocean wave;
Heaven scarce can hold ye, and the bound
Of earth knows not your various sound
More than the secret grave.

Ye speak of human life! now high,
Like thunder-clouds, ye brave the sky,
Now sleep ye by the streams;
Ye are like earthquakes roaring wild
And then make musick, as a child
That singeth in its dreams.

Away, my fancies! even now
I feel no more upon my brow
The mountain-breezes fall
The stars are out, and I must go
Down to my quiet home below,
Among the poplars tall.

And I, whilst dreaming in my bed,
Will list your dirges o'er my head,
And think ye sing to me,
And dream that I have wings like you,
To fan the locks on heaven's clear brow,
And roll unchain'd and free.



BUNKER'S HILL MONUMENT, CHARLESTOWN, MASS.

Above, we give a representation of the Monument about being completed at Charlestown, in commemoration of a battle, upon its very grounds, the most bloody in its details, and perhaps the most important in its consequences of any that took place during the Revolution. The Battle was fought on the 17th day of June, 1775. Just 50 years after, viz: on the 17th of June, 1825, the corner stone of this *Obelisk* was laid, in the presence of the illustrious Lafayette, and an immense concourse of spectators who had assembled from all quarters to witness the interesting ceremonies. The foundation, 50 feet in diameter was found insufficiently deep to resist the effects of the frost, and was therefore taken up, sunk and relaid again on the 21st of July 1827. While the Society possessed funds, the work progressed under the superintendence of Mr. Solomon Willard architect, who generously offered three years of his services, and gave $1000 to forward the undertaking.

The obelisk is to rise 220 feet from the foundation; to be 30 feet square at the base, and 15 feet at top, with internal spiral stairs ascending the whole height. When completed, this monument will be the highest of the kind in the world, and it is said not much lower than the Egyptian Pyramids.

It will require 6,700 tons of Quincy granite, consisting of eighty courses, each course two feet and eight inches in width. Fourteen courses have been already laid on, amounting to 2,800 tons, and reaching upward about forty feet. The lot of ground upon which the monument stands, comprising 15 acres, cost the Society $24,000. The Society have been much embarrassed with the immense expense of the work, and for a long time past they have been unable to progress.

But we understand they have renewed their efforts this fall, and that their means have been sufficiently enlarged to carry them through. The military of Louisiana, on the ground that it is a matter which interests the whole country, have recently rendered the Society some pecuniary assistance. All obstacles it is said are now nearly overcome, and they have commenced operating this fall with the expectation of completing the monument within the coming year.

We take the following description of the memorable Battle of Bunker's Hill from Botta:

"The right wing of the Americans was flanked by the houses of Charlestown, which they occupied; and the part of this wing which connected with the main body, was defended by the redoubt erected upon the heights of Breed's Hill. The centre, and the left wing, formed themselves behind the trench, which, following the declivity of the hill, extended towards, but without reaching Mystic river. The American officers having reflected that the most feeble part of their defensive was precisely this extremity of the left wing, for the trench not extending to the river, and the land in this place being smooth and easy, there was danger of being turned, and attacked in the rear, they determined, therefore, to obstruct this passage by two parallel palisades, and to fill up with herbage the interval between the one and the other. The troops of Massachusetts occupied Charlestown, the redoubt, and a part of the trench; those of Connecticut, commanded by captain Nolten, and those of New Hampshire, under Colonel Starke, the rest of the trench. A few moments before the action commenced, Doctor Warren, who had been appointed General, a personage of great authority, and a zealous patriot, arrived with some reinforcements. General Pomeroy made his appearance at the same time. The first joined the troops of his own province, of Massachusetts; the second took command of those from Connecticut. General Putnam directed in chief; and held himself ready to repair to any point where his presence might be most wanted. The Americans had no cavalry: that which was expected from the southern provinces was not yet arrived. Their artillery, without being very numerous, was nevertheless competent. They wanted not for muskets; but the greater part were without bayonets. Their sharp-shooters, for want of rifles, were obliged to use common fire-locks; but as marksmen they had no equals. Such were the means of the Americans; but their hope was great, and they were all impatient for the signal of combat.

"Between mid-day and one o'clock, the heat being intense, all was in motion in the British camp. A multitude of sloops and boats, filled with soldiers, left the shore of Boston, and stood for Charlestown: they landed at Moreton's Point, without meeting resistance; as the ships of war and armed vessels effectually protected the debarkation with the fire of their artillery, which forced the enemy to keep within his intrenchments. This corps consisted of ten companies of grenadiers, as many of light infantry, and a proportionate artillery; the whole under the command of Major-general Howe and Brigadier-general Pigot. The troops on landing began to display, the light infantry upon the right, the grenadiers upon the left; but, having observed the strength of the position, and the good countenance of the Americans, General Howe made a halt, and sent to call a reinforcement.

"The English formed themselves in two columns. Their plan was, that the left wing under General Pigot should attack the rebels in Charlestown, while the centre assaulted the redoubt; and the right wing, consisting of light infantry, should force the passage near the river Mystic, and thus assail the Americans in flank and rear: which would have given the English a complete victory. It appears, also, that General Gage had formed the design of setting fire to Charlestown, when evacuated by the enemy, in order that the corps destined to assail the redoubt, thus protected by the flame and smoke, might be less exposed to the fire of the Provincials.

"The dispositions having all been completed, the English put themselves in motion. The provincials that were stationed to defend Charlestown, fearing lest the assailants should penetrate between this town and the redoubt, and thus to find themselves cut off from the rest of the army, retreated. The English immediately entered the town, and fired the buildings: as they were of wood, in a moment the combustion became general.

"They continued a slow march against the redoubt and trench, halting from time to time for the artillery to come up and act with some effect previous to the assault. The flames and smoke of Charlestown were of no use to them, as the wind turned them in a contrary direction. Their gradual advance, and the extreme clearness of the air, permitted the Americans to level their muskets. They however suffered the enemy to approach before they commenced their fire, and waited for the assault in profound tranquillity. It would be difficult to paint the scene of terrour presented by the actual circumstances. A large town, all enveloped in flames, which, excited by a violent wind, rose to an immense height, and spread every moment more and more; an innumerable multitude, rushing from all parts, to witness so unusual a spectacle, and see the issue of the sanguinary conflict that was about to commence. The Bostonians and soldiers of the garrison not in actual service were mounted upon the spires, upon the roofs, and upon the heights. The hills and circumjacent fields, from which the dread arena could be viewed in safety, were covered with swarms of spectators, of every rank, and age, and sex; each agitated by fear or hope, according to the party he espoused.

"The English having advanced within reach of musketry, the Americans showered upon them a volley of bullets. This terrible fire was so well supported, and so well directed, that the ranks of the assailants were soon thinned and broken: they retired in disorder to the place of their landing, and some threw themselves precipitately into the boats. The field of battle was covered with the slain. The officers were seen running hither and thither, with promises, with exhortations, and with menaces, attempting to rally the soldiers, and inspirit them for a second attack. Finally, after the most painful efforts, they resumed their ranks and marched up to the enemy. The Americans reserved their fire, as before, until their approach, and received them with the same deluge of balls. The English, overwhelmed and routed, again fled to the shore. In this perilous moment General Howe remained for some time alone on the field of battle: all the officers who surrounded him were killed or wounded. It is related, that at this critical conjuncture, upon which depended the issue of the day, General Clinton, who, from Cop's Hill, examined all the movements, on seeing the destruction of his troops, immediately resolved to fly to their succour.

"This experienced commander, by an able movement, re-established order; and, seconded by the officers, who felt all the importance of success, to English honour and the course of events, he led the troops to a third attack. It was directed against the redoubt at three several points. The artillery of the ships not only prevented all reinforcements from coming to the Americans, by the isthmus of Charlestown, but even uncovered and swept the interiour of the trench, which was battered in front at the same time. The ammunition of the Americans was nearly exhausted, and they could have no hopes of a recruit. Their fire must of necessity languish. Meanwhile, the English had advanced to the foot of the redoubt. The provincials, destitute of bayonets, defended themselves valiantly with the butt end of their muskets. But the redoubt being already full of enemies, the American general gave the signal of retreat, and drew off his men.

"While the left wing and centre of the English army were thus engaged, the light infantry had impetuously attacked the palisades which the provincials had erected in haste upon the bank of the river Mystic. On the one side, and on the other, the combat was obstinate; and if the assault was furious the resistance was not feeble. In spite of all the efforts of the royal troops, the provincials still maintained the battle in this part; and had no thoughts of retiring, until they saw the redoubt and upper part of the trench were in the power of the enemy. Their retreat was executed with an order not to have been expected from new levied soldiers. This strenuous resistance of the left wing of the American army, was, in effect, the salvation of the rest; for, if it had given ground but a few instants sooner, the enemy's light infantry would have taken the main body and right wing in the rear, and their situation would have been hopeless. But the Americans had not yet reached the term of their toils and dangers. The only way that remained of retreat, was by the isthmus of Charlestown, and the English had placed there a ship of war and two floating batteries, the balls of which raked every part of it. The

Americans, however, issued from the peninsula without any considerable loss. It was during the retreat that Doctor Warren received his death. Finding the corps he commanded hotly pursued by the enemy, despising all danger, he stood alone before the ranks, endeavouring to rally his troops, and to encourage them by his own example. He reminded them of the mottoes inscribed on their ensigns; on one side of which were these words, "*An appeal to Heaven;*" and on the other, "*Qui transtulit, sustinet:*" meaning, that the same Providence which brought their ancestors through so many perils, to a place of refuge, would also deign to support their descendants.

"An English officer perceived Doctor Warren, and knew him: he borrowed the musket of one of his soldiers, and hit him with a ball, either in the head, or in the breast. He fell dead upon the spot. The Americans were apprehensive, lest the English, availing themselves of victory, should sally out of the peninsula, and attack their head quarters at Cambridge. But they contented themselves with taking possession of Bunker's Hill, where they intrenched themselves, in order to guard the entrance of the neck against any new enterprise on the part of the enemy. The provincials, having the same suspicion, fortified Prospect Hill, which is situated at the mouth of the isthmus, on the side of the main land. But neither the one nor the other were disposed to hazard any new movement; the first, discouraged by the loss of so many men, and the second, by that of the field of battle and the peninsula. The provincials had to regret five pieces of cannon, with a great number of utensils employed in fortification, and no little camp equipage."

ALLIGATORS ON THE GANGES.

The banks of the Ganges opposite to Monghyr have not the slightest pretensions to beauty; low, flat, swampy and intersected with reedy islets, they are the haunts of multitudes of Alligators, which, in the hot season, may be seen sunning themselves by the side of the huge ant-hills erected upon the sand-banks, appearing above the surface of the water. Some of these animals attain to a prodigious size; they are exceedingly difficult to kill, in consequence of the adamantine armour in which the greatest part of their bodies is cased. Even when the balls penetrate less guarded points they are so tenacious of life as to cause a great deal of trouble before they can be finally despatched. One, which had received eight balls, and was supposed to be dead, after having been tied to the bamboo of a budgerow for a whole day, exhibited in the evening so much strength and fierceness, as to be a dangerous neighbour. Many of these monsters are fifteen feet long, and swim fearlessly past the boats, lifting up their terrifick heads, and raising their dark bodies from the water as they glide along. Though not so frequently as in former times, when the echoes of the river are less disturbed by the report of fire arms, natives are still the victims of that species of alligator, which lies in wait for men and animals, venturing incautiously too near their haunts. In many that have been killed, the silver ornaments worn by women and children, have been found, a convincing proof of the fearful nature of their prey. An alligator, it is said, will sometimes make a plunge amidst a group of bathers, and singling out one of the party dart into the middle of the stream, defying pursuit by the rapidity of its movements against the current, through which it will fly with the velocity of an arrow, and, having reached deep water, it sinks with its victim into the abyss of the river. Sportsmen, the younger portion especially, delight in waging war against these giants of the stream, as they lie wallowing in the mud in shallow places, and presenting the defenceless parts of their bodies to the marksman. In the Sunderbunds, where the creeks and natural canals of the Ganges wind through the forests whose margin almost mingles with the streams alligators are sometimes engaged in deadly encounters with the tiger. A battle of this kind witnessed by a missionary, is described to have been a drawn one, for, although the tiger succeeded in dragging his unwieldly adversary into a jungle, after a lapse of an hour or two the alligator was seen to emerge and to regain the water, not very materially injured by the conflict it had sustained.—*Asiatic Journal.*

The argument of Socrates to prove the immortality of the soul is this;

In nature, contraries produce their opposites. A contrary can never enter into its opposite—as an odd number can never be even. The soul is the animating essence of our bodies; it is always the same; it carries life with it into all the bodies it enters;—death is contrary to life;—then the soul will never receive that which is contrary to what it carries in its own bosom;—then the soul will not admit of death. That which never admits of death is called immortal;—the soul does not admit of death; therefore the soul is immortal.

THE WAY TO ANSWER QUESTIONS.

What makes a body hot?
You would not say it was heat, but fire.
What makes a body sick?
You would not say it was sickness, but fever.
What makes a number odd?
You would not say oddness, but unity.

These things have their use. If people would but speak properly, definitely and thoughtfully, how much more nearly would the purposes of language be accomplished, and how much less perplexity would harass men's brains.

Conversation enriches the understanding, but solitude is the school for genius.—*Gibbon.*

TO THE EVENING WIND.—Bryant.

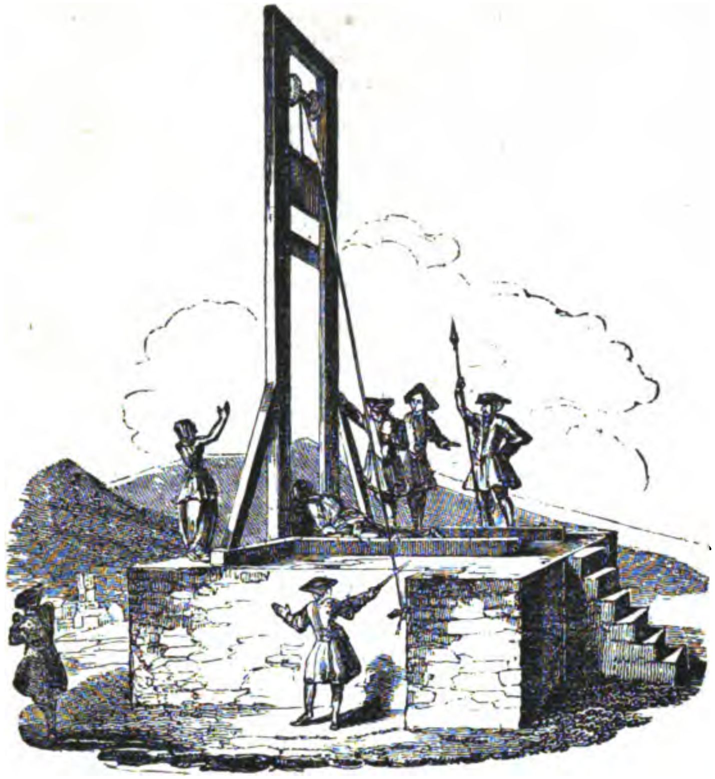
Spirit that breathest through my lattice, thou
That coolest the twilight of the sultry day,
Gratefully flows thy freshness round my brow;
Thou hast been out upon the deep at play,
Riding all day the wild blue waves till now,
Roughening their crests, and scattering high their spray,
And swelling the white sail. I welcome thee
To the scorched land, thou wanderer of the sea!

Nor I alone—a thousand bosoms round
Inhale thee in the fulness of delight;
And languid forms rise up, and pulses bound
Livelier, at coming of the wind of night;
And, languishing to hear thy grateful sound,
Lies the vast inland stretched beyond the sight.
Go forth into the gathering shade; go forth,
God's blessing breathed upon the fainting earth!

Go, rock the little wood-bird in his nest,
Curl the still waters, bright with stars, and rouse
The wide old wood from his majestick rest,
Summoning from the innumerable boughs
The strange, deep harmonies that haunt his breast:
Pleasant shall be thy way where meekly bows
The shutting flower, and darkling waters pass,
And'twixt the o'ershadowing branches and the grass.

The faint old man shall lean his silver head
To feel thee: thou shalt kiss the child asleep,
And dry the moistened curls that overspread
His temples, while his breathing grows more deep;
And they who stand about the sick man's bed,
Shall joy to listen to thy distant sweep,
And softly part his curtains to allow
Thy visit, grateful to his burning brow.

Go—but the circle of eternal change,
That is the life of nature, shall restore,
With sounds and scents from all thy mighty range,
Thee to thy birth-place of the deep once more;
Sweet odours in the sea-air, sweet and strange,
Shall tell the home-sick mariner of the shore;
And listening to thy murmur, he shall deem
He hears the rustling leaf and running stream.



THE HALIFAX GIBBET AND GIBBET-LAW.

The History of Halifax in Yorkshire, 12mo. 1712, sets forth "a true account of their ancient, odd, customary gibbet-law; and their particular form of trying and executing of criminals, the like not used in any other place in Great Britain." The Halifax gibbet was in the form of the guillotine, and its gibbet-law quite as remarkable. The work referred to, which is more curious than rare, painfully endeavours to prove this law wise and salutary. It prevailed only within the forest of Hardwick, which was subject to the lord of the manor of Wakefield, a part of the duchy of Lancaster. If a felon were taken within the liberty of the forest with cloth, or other commodity, of the value of thirteen-pence halfpenny, he was, after three market-days from his apprehension and condemnation, to be carried to the gibbet, and there have his head cut off from his body. When first taken, he was brought to the lord's bailiff in Halifax, who kept the town, had also the keeping of the axe, and was the executioner at the gibbet. This officer summoned a jury of frith-burghers to try him on the evidence of witnesses not upon oath: if acquitted he was set at liberty, upon payment of his fees; if convicted, he was set in the stocks on each of the three subsequent market-days in Halifax, with the stolen goods on his back, if they were portable; if not, they were placed before his face. This was for a terrour to others, and to engage any who had aught against him, to bring accusations, although after the three market-days he was sure to be executed for the offence already proved upon him. But the convict had the satisfaction of knowing, that after he was put to death, it was the duty of the coroner to summon a jury, "and sometimes the same jury that condemned him," to inquire into the cause of his death, and that a return thereof would be made into the Crown-office; "which gracious and sage proceedings of the coroner in that matter ought, one would think, to abate, in all considering minds, that edge of acrimony which hath provoked malicious and prejudiced persons to debate this laudable and necessary custom." So says the book.

In April, 1650, Abraham Wilkinson and Anthony Mitchell were found guilty of stealing nine yards of cloth and two colts, and on the 30th of the month received sentence, "to suffer death, by having their heads severed and cut off from their bodies at Halifax gibbet," and they suffered accordingly. These were the last persons executed under Halifax gibbet-law.

The execution was in this manner:—The prisoner being brought to the scaffold by the bailiff, the axe was drawn up by a pulley, and fastened with a pin to the side of the scaffold. "The bailiff, the jurors, and the minister chosen by the prisoner, being always upon the scaffold with the prisoner, in most solemn manner, after the minister had finished his ministerial office and christian duty, if it was a horse, an ox, or cow, &c. that was taken with the prisoner, it was thither brought along with him to the place of execution, and fastened by a cord to the pin that stayed the block, so that when the time of the execution came, (which was known by the jurors holding up one of their hands,) the bailiff, or his servant, whipping the beast, the pin was plucked out, and execution done; but if there were no beast in the case, then the bailiff, or his servant, cut the rope."

But if the felon, after his apprehension, or in his going to execution, happened to make his escape out of the forest of Hardwick, which liberty, on the east end of the town, doth not extend above the breadth of a small river; on the north about six hundred paces; on the south about a mile; but on the west about ten miles; —if such an escape were made, then the bailiff of Halifax had no power to apprehend him out of his liberty; but if ever the felon came again into the liberty of Hardwick, and were taken, he was certainly executed. One Lacy, who made his escape, and lived seven years out of the liberty, after that time coming boldly within the liberty of Hardwick, was retaken, and executed upon his former verdict of condemnation.

The records of executions by the Halifax gibbet, before the time of Elizabeth, are lost; but during her reign twenty-five persons suffered under it, and from 1623 to 1650 there were twelve executions. The machine is destroyed. The engraving represents the instrument, from a figure of it in an old map of Yorkshire.—*Every day Book.*

MA-KA-TAI-ME-SHE-KIA-KIAK, OR BLACK HAWK.

The following is Black Hawk's account of himself, and the first appearance of whites among the Indians, dictated by himself.

"I was born at the Sac Village, on Rock River, in the year 1767, and am now in my sixty-seventh year. My great grandfather, Na-na-ma-kee, or Thunder, (according to the tradition given me by my father, Py-e-say,) was born in the vicinity of Montreal, where the Great Spirit first placed the Sac Nation, and inspired him with a belief that, at the end of four years he should see a *white man*, who would be to him a father. Consequently he blacked his face, and eat but once a day, (just as the sun was going down,) for three years, and continued dreaming throughout all this time whenever he slept,—when the Great Spirit again appeared to him, and told him, that at the end of one year more, he should meet his father, and directed him to start seven days before its expiration, and take with him his two brothers Na-mah, or Sturgeon, and Pau-ka-hum-ma-wa, or Sun Fish, and travel in a direction to the left of sun-rising. After pursuing this course five days, he sent out his two brothers to listen if they could hear a noise, and if so, to fasten some grass to the end of a pole, erect it, pointing in the direction of the sound, and then return to him.

"Early next morning they returned, and reported that they had heard sounds which appeared near at hand, and that they had fulfilled his order. They all then started for the place where the pole had been erected; when on reaching it, Na-na-ma-kee left his party, and went, alone, to the place from whence the sounds proceeded, and found that the white man had arrived and pitched his tent. When he came in sight, his father came out to meet him. He took him by the hand, and welcomed him into his tent. He told him that he was the son of the King of France—that he had been dreaming for four years—that the Great Spirit had directed him to come here, where he should meet a nation of people who had never yet seen a white man—that they should be his children, and he should be their father—that he had communicated these things to the king, his father, who laughed at him, and called him a Ma-she-na—but he insisted on coming here to meet his children, where the Great Spirit had directed him. The king told him that he would neither find land nor people — that this was an uninhabited region of lakes and mountains; but, finding that he would have no peace without it, fitted out a *na-pe-qua*, manned it, and gave it to him in charge, when he immediately loaded it, set sail, and had now landed on the very day that the Great Spirit had told in his dreams he should meet his children. He had now met the man who should in future have charge of all the nation.

"He then presented him with a medal, which he hung round his neck. Na-na-ma-kee informed him of *his* dreaming, and told him that his two brothers remained a little ways behind. His father gave him a shirt, blanket, and handkerchief, besides a variety of presents, and told him to go and bring his brothers. Having laid aside his buffalo robe, and dressed himself in his new dress, he started to meet his brethren.—When they met he explained to them his meeting with the white man, and exhibited to their view the presents that he had made him—took off his medal and placed it upon Na-ma, his elder brother, and requested them both to go with him to his father.

"They proceeded thither,—were ushered into the tent, and, after some brief ceremony, his father opened his chest and took presents therefrom for the new-comers. He discovered that Na-na-ma-kee had given his medal to Na-ma. He told him that he had done wrong—he should wear that medal himself, as he had others for his brethren: That which he had given him was a type of the rank he should hold in the nation: That his brothers could only rank as *civil* chiefs,—and their duties should consist of taking care of the village, and attending to its civil concerns—whilst his rank, from his superior knowledge, placed him over them all. If the nation gets into any difficulty with another, then his Puc-co-ha-wa-ma, or sovereign decree, must be obeyed. If he declared war, he must lead them on to battle: That the Great Spirit had made him a great and brave general, and had sent him here to give him that medal, and make presents to him for his people.

"His father remained four days—during which time he gave him guns, powder and lead, spears and lances, and showed him their use;—so that in war he could chastise his enemies,—and in peace they could kill buffalo, deer, and other game, necessary for the comforts and luxuries of life. He then presented the others with various kinds of cooking utensils, and learned them their uses,—and having given them a large quantity of goods, as presents, and every other thing necessary for their comfort, he set sail for France, after promising to meet them again, at the same place, after the twelfth moon.

"The three newly-made chiefs returned to their village, and explained to Muk-a-ta-quet, their father, who was the principal chief of the nation, what had been said and done. The old chief had some *dogs* killed, and made a feast, preparatory to resigning the sceptre, to which all the nation were invited. Great anxiety prevailed among them, to know what the three brothers had seen and heard,—when the old chief rose and related to them the sayings and doings of his three sons, and concluded by observing, that 'the Great Spirit had directed that these, his three children, should take the rank and power that had been his,—and that he yielded these honours and duties willingly to them,—because it was the wish of the Great Spirit, and he could never consent to make him angry!' He now presented the great medicine bag to Na-na-ma-kee, and he told him, 'that he cheerfully resigned it to him—it is the soul of our nation—it has never yet been disgraced!—and I will expect you to keep it unsullied!'

"Some dissension arose among some of them, in consequence of so much power being given to Na-na-ma-kee, he being so young a man. To quiet this, Na-na-ma-kee, during a violent *thunder storm*, told them that he had *caused* it! and that it was an exemplification of the *name* the Great Spirit had given him. During this storm, the *lightning* struck, and set fire to a tree close by; (a sight they had never witnessed before.) He went to it, and brought away some of its burning branches, made a fire in the lodge, and seated his brothers thereby, opposite to each other; whilst he stood up and addressed his people as follows:

"'I am yet young—but the Great Spirit has called me to the rank I now hold among you. I have never sought to be any thing more than my birth entitled me to —I have not been ambitious—nor was it ever my wish, whilst my father lives, to have taken his place—nor have I now usurped his powers. The Great Spirit caused me to dream for four years,—he told me where to go and meet the white man, who would be a kind father to us all. I obeyed his order. I went, and have seen our new father. You have all heard what was said and done. The great Spirit directed him to come and meet me, and it is his order that places me at the head of my nation,—the place which my father has willingly resigned.

"'You have all witnessed the power which has been given to me by the Great Spirit, in making that fire—and all that I now ask is, that these, my two chiefs, may never let it go out: That they preserve peace among you, and administer to the wants of the needy: And, should an enemy invade our country, I will then, but not until then, assume command, and go forth with my band of brave warriors, and endeavour to chastise them!'"

"At the conclusion of this speech, every voice cried out for Na-na-ma-kee! All were satisfied, when they found that the *Great Spirit had done* what they had suspected was the work of Na-na-ma-kee, he being a very shrewd young man.

"The next spring, according to promise, their French father returned, with his na-pe-qua richly laden with goods, which were distributed among them. He continued for a long time to keep up a regular trade with them—they giving him, in exchange for his goods, furs and peltries."

In the course of his life Black Hawk formed an intimacy with a man near his native village, and adopted his son. The boy was cruelly murdered by the whites; Black Hawk thus describes the manner in which he avenged his death:

"I immediately collected a party of thirty braves, and explained to them my object in making this war party—it being to avenge the death of my adopted son, who had been cruelly and wantonly murdered by the whites. I explained to them the pledge I had made his father, and told them that they were the last words that he had heard spoken! All were willing to go with me, to fulfil my word. We started in canoes, and descended the Mississippi, until we arrived near the place where fort Madison had stood. It had been abandoned by the whites and burnt; nothing remained but the chimneys. We were pleased to see that the white people had retired from our country. We proceeded down the river again. I landed, with one brave, near Capo Gray; the remainder of the party went to the mouth of the Quiver. I hurried across the trail that led from the mouth of the Quiver to a fort, and soon after heard firing at the mouth of the creek. Myself and brave concealed ourselves on the side of the road. We had not remained here long, before two men riding one horse, came in full speed from the direction of the sound of the firing. When they came sufficiently near, we fired; the horse jumped, and both men fell! We rushed towards them—one rose and ran. I followed him, and was gaining on him, when he ran over a pile of rails that had lately been made, seized a stick and struck at me I now had an opportunity to see his face—I knew him! He had been at Quash-qua-me's village to learn his people how to plough. We looked upon him as a good man. I did not wish to kill him, and pursued him no further. I returned and met my brave; he said he had killed the other man, and had his *scalp* in his hand! We had not proceeded far, before we met the man supposed to be killed, coming up the road, staggering like a drunken man, all covered with blood! This was the most terrible sight I had ever seen. I told my comrade to *kill him*, to put him out of his misery! I could not look at him. I passed on, and heard a rustling in the bushes, and distinctly saw two little boys concealing themselves! I thought of my own children, and passed on without noticing them! My comrade here joined me, and in a little while we met the balance of our party. I told them that we would be pursued, and directed them to follow me. We crossed the creek, and formed ourselves in the timber. We had not been here long, before a party of mounted men rushed at full speed upon us! I took deliberate aim, and shot the man leading the party. He fell from his horse lifeless! All my people fired, but without effect. The enemy rushed upon us without giving us time to reload. They surrounded us, and forced us to run into a deep sink-hole, at the bottom of which there was some bushes. We loaded our guns, and awaited the approach of the enemy. They rushed to the edge of the hole and fired, killing one of our men. We returned the fire instantly, and killed one of their party! We reloaded, and commenced digging holes in the side of the bank to protect ourselves, whilst a party watched the movements of the enemy, expecting that their whole force would be upon us immediately. Some of my warriors began singing their *death-songs!* I heard the whites talking—and called to them, 'to come out and fight!' I did not like my situation, and wished the matter settled. I soon heard chopping and knocking. I could not imagine what they were doing. Soon after they run up wheels with a battery on it, and fired down without hurting any of us. I called to them again, and told them if they were '*brave* men, to come down and fight us.' They gave up the siege, and returned to their fort about dusk. There were eighteen in this trap with me. We all got out safe, and found one white man dead on the edge of the sink-hole. They did not remove him, for fear of our fire. We *scalped* him, and placed our dead man upon him! We could not have left him in a better situation, than on an enemy."

BLACK HAWK'S PHILOSOPHY.

"We can only judge of what is proper and right by our standard of right and wrong, which differs widely from the whites, if I have been correctly informed. The whites *may do bad* all their lives, and then, *if* they are *sorry for it* when about to die, *all is well!* But with us it is different: we must continue throughout our lives to do what we conceive to be good. If we have corn and meat, and know of a family that have none, we divide with them. If we have more blankets than sufficient, and others have not enough, we must give to them that want.

"My reason teaches me that *land cannot be sold.* The Great Spirit gave it to his children to live upon, and cultivate, as far as is necessary for their subsistence; and so long as they occupy and cultivate it, they have the right to the soil—but if they voluntarily leave it, then any other people have a right to settle upon it. Nothing can be sold, but such things as can be carried away."

GREEK ANTHOLOGY.

THE DEATH OF CLEOMBROTUS.

Cleombrotus, upon the rampart's height,
Bade the bright sun farewell, then plunged to night.
The cares of life to him were yet unknown—
Glad were his hours—his sky unclouded shone—
But Plato's reason caught his youthful eye,
And fix'd his soul on immortality.—Callimachus.

LONG BEARDS.

If beards long and bushy true wisdom denote,
Then Plato must bow to a hairy he-goat.—Lucian.

AN IDLE SERVANT.

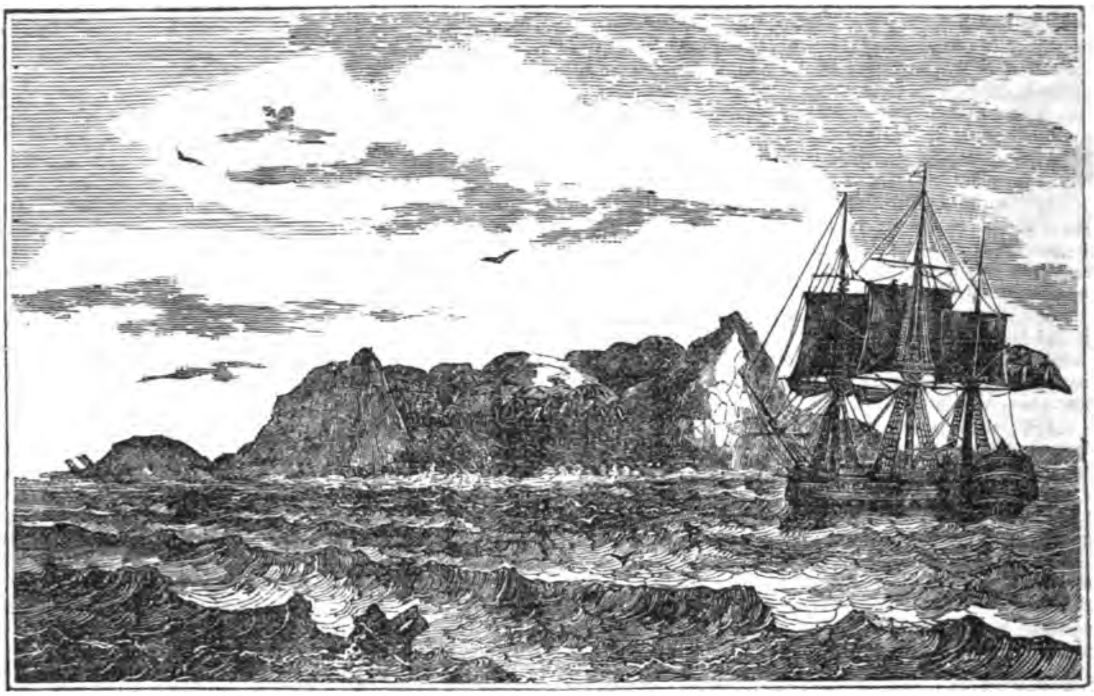
You feed so fast—and run so very slow—
Eat with your legs, and with your grinders go!—*ib.*

A MISER.

A rich man's purse, a poor man's soul is thine,
Starving thy body, that thy heirs may dine.—Lucullus.

USE OF RICHES.

Abundance is a blessing to the wise;
The use of riches in discretion lies:
Learn this, ye men of wealth! a heavy purse
In a fool's pocket is a heavy curse.—Menander.



PITCAIRN'S ISLAND, AND THE MUTINEERS OF THE BOUNTY.

The British Government having determined to introduce the bread-fruit tree into the West India Islands, the ship Bounty was placed under the command of Captain Bligh. She left England in December, 1787, with orders to proceed to Otaheite, there to obtain a sufficient supply of the plants, and on her return to bring some specimens to England. Her crew consisted of forty-four persons and a gardener. She arrived at her destination in October, 1788. Six months were spent at the island in collecting and stowing away the plants, during which time the officers and seamen had free access to the shore, and had made many friends among the natives. In April, 1789, they took leave of their friends at Otaheite, and proceeded to Anamooka, where Captain Bligh replenished his stock of water and took in bread-fruits, hogs, goats, &c., and put to sea again on the 26th of the same month.

Throughout the voyage, Captain Bligh had repeated misunderstandings with his ship's company; among the crew there was no real discontent, much less any idea of offering violence to their commander, but the officers, it must be admitted, had some cause for dissatisfaction, especially the master and Mr. Christian, the mate.

The day previous to the mutiny, a serious quarrel occurred between Captain Bligh and his officers, about some cocoa-nuts which were missed from his private stock; and Mr. Christian fell under his commander's displeasure. The same evening he was invited to supper in the cabin; but he returned an excuse. On the 28th of April, 1789, the ship was passing Tofoa, one of the Friendly Islands, during one of those beautiful nights which characterize the tropical regions, when the mildness of the air and the stillness of nature disposes the mind to reflection. Christian, brooding over his grievances determined, as he could not redress them, that he would at least escape from a repetition of them. Absence from England, and a long residence at Otaheite, where new connexions had been formed, had weakened the recollection of his native country, and prepared his mind for the reception of ideas, which the situation of the ship and the serenity of the moment, particularly favoured. His plan, strange as it must appear for a young officer to adopt, who was fairly advanced in an honourable profession, was to set himself adrift on a raft, and make his way to the island then in sight. As quick in the execution as in the design, the raft was soon constructed, and various useful articles were got together, and he was on the point of launching it, when a young officer, who was afterwards lost in the Pandora, to whom Christian communicated his intention, recommended him to endeavour to take possession of the ship, rather than risk his life upon so hazardous an expedition. This he thought would not be very difficult, as many of the ship's company were not well disposed towards the commander, and would be very glad to return to Otaheite and reside among their friends in that island. This daring suggestion too well accorded with the disposition of Christian's mind, and, hazardous as it was, he determined to attempt it, resolving, if he failed, to throw himself into the sea; and that there might be no chance of being saved, he tied a deep-sea lead about his neck, and concealed it within his clothes.

Christian happened to have the morning-watch, and as soon as he had relieved the officer on deck, he entered into conversation with Quintal, the only one of the seamen who had formed any serious attachment at Otaheite, and, after expatiating on the happy hours he had passed there, disclosed his intention. Quintal, however, said it was a dangerous attempt, and declined taking a part. Vexed at a repulse in a quarter where he was most sanguine of success, and particularly at having revealed sentiments which, if made known, would bring him to an ignominious death, Christian became desperate, exhibited the lead about his neck, in testimony of his own resolution, and taxed Quintal with cowardice; declaring it was fear alone which restrained him. This Quintal denied, and recommended that some one else should be tried: “ Ask Martin, for instance," said he. Martin, more ready than his shipmate, declared "he was for it; it was the very thing." Successful in one instance, Christian went to every man of his watch, many of whom he found disposed to join him, and before day-light the greater part of the ship's crew were brought over. Adams, of whom we shall hear much in the sequel, was sleeping in his berth, when one of the men came to him and whispered that Christian was going to take possession of the ship, and set his commander and the master on shore. On hearing this, Adams went on deck, and found it in great confusion; but not then liking to take any part in the transaction, he returned to his hammock, and remained there until he saw Christian at the arm-chest, distributing arms to all who came for them, and then, seeing measures had proceeded so far, and apprehensive of being on the weaker side, he turned out again, and went for a cutlass.

All those who proposed to assist Christian being armed, Adams, with others, were ordered to secure the officers, while Christian and the master-at-arms proceeded to the cabin to make a prisoner of Captain Bligh. They seized him in his cot, bound his hands behind him, and brought him on deck. He remonstrated with them, but received only abuse in return, and a blow from the master-at-arms with the flat side of a cutlass. He was placed near the binnacle, and detained there, with his arms pinioned, by Christian, who held him with one hand, and a bayonet with the other. The master jumped upon the forecastle, and endeavoured to form a party to retake the ship; but he was quickly secured and sent below in confinement.

The launch was hoisted out, and the captain's party, having collected what they could for their voyage, were ordered into it. The captain was then conducted to the gangway, and ordered to descend into the boat, where his hands were unbound, and the boat was veered astern, and the ship stood towards the island. During this time, Captain Bligh requested some muskets to protect his party against the natives; they were refused, but four cutlasses were thrown into the boat. When about ten leagues from Tofoa, the launch was cast off, and "Huzza for Otaheite!" echoed throughout the Bounty.

There now remained in the ship, Mr. Christian, the mate; Heywood, Young, and Steward, midshipmen; the master-at-arms, and sixteen seamen, besides three artificers and the gardener; in all twenty-five. The captain's party set adrift in the launch numbered nineteen.

The mutineers arrived at Otaheite on the 6th of June. Fletcher Christian was chosen commander, and had taken the ship first to Toobonae, but finding that island destitute of animal provisions, he returned to Otaheite to procure a stock of pigs and goats for his settlement. By a fictitious tale, that he had met with Captain Cook, who had commanded him to return thither for supplies, he obtained from the natives 460 hogs, 150 goats, and great numbers of fowls, dogs, and cats: eleven female Otaheitans, and thirteen men, who had concealed themselves in the ship, also sailed with them. They proceeded to Toobonae again on the 16th of June, but on arriving there, found the natives hostile to their landing, and the majority of the mutineers determined to return to Otaheite and finally settle there. Accordingly the Bounty sailed for that island the third time, and anchored in Matavai Bay on the 20th of Sept. 1789. Sixteen of the crew then landed with their proportion of the property and arms that were on board. "The rest," say the accounts published at the time, "having taken thirty-five of the natives, men, women, and boys, on board with them, sailed the next night with Christian, and have never since been heard of."

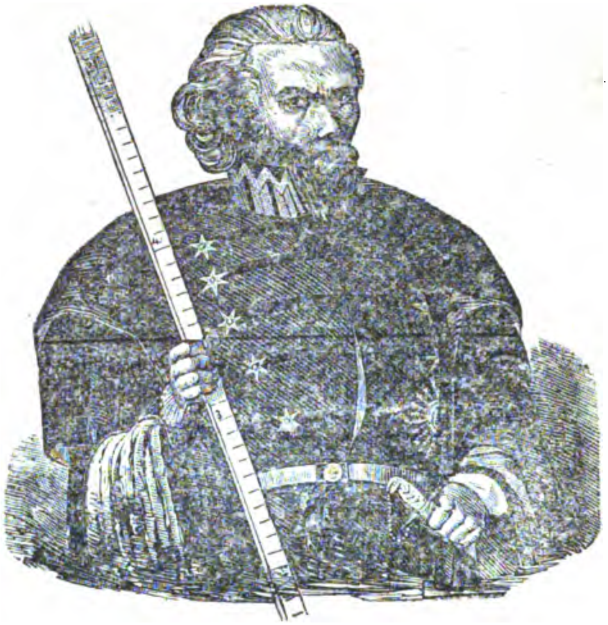
We now return to Captain Bligh, who, with his party, sailed without shelter, and almost level with the water's edge, upwards of twelve hundred leagues, and after enduring incredible harpships, arrived at the island of Timor on the 14th of June. Here they found a Dutch settlement, and were treated with great kindness and liberality by the Governour Van Este. They afterwards went to Batavia, where finding a packet bound for Europe, Bligh and some of the officers took their passage in her, and ultimately arrived safe in England.

The affair of the mutiny being reported to Government, the Pandora frigate was despatched to Otaheite to secure the mutineers, and recover the ship. She arrived at Matavai Bay on the 27th March 1791, and succeeded in securing fourteen of the mutineers who had settled there, two having been killed by the natives. With these she sailed for England on the 8th of May, accompanied by a schooner, which had been built on the island by the mutineers. The Pandora was wrecked on her passage home, and four of the mutineers were drowned; the remaining ten, on reaching England, were brought to trial, and tried before a court-martial. Four were acquitted, as having acted under constraint, and were provided for at Greenwich hospital; one was discharged on account of an informality in the indictment; the other five were found guilty, and condemned to death; but of these, two received a pardon, and the three others were executed at Spithead.

Such was, for twenty years, the extent of information as to the fate of the mutineers, and it was generally considered certain, that the Bounty had struck on a rock in those seas, and foundered, and that the whole of her crew had been lost. But about the year 1810, some rumours got afloat that an American ship (the Topaz, of Boston, Captain Folger,) had discovered the retreat of Christian and his party. No confirmation, however, of such reports was obtained, until three years afterwards; when Sir Thomas Staines, in his Majesty's ship Briton, sailing from the Marquesas islands to Valparaiso, fell in with Pitcairn's Island. It does not appear that Sir Thomas Staines had heard the report in question, for on arriving in the offing, it being night, he hove-to, in order to ascertain whether the island was inhabited. In the morning, he was surprised to see the land laid out in regular plantations, and scattered with huts, more neatly constructed than the native dwellings in the neighbouring islands. When about two miles from the shore, they saw some natives bringing down a canoe on their shoulders, which being launched, two of them stepped into it, and, dashing through the surf, rowed up along-side the ship. But what was the astonishment of Captain Staines and his crew, in hearing one of them call out, in good nautical English, "Wont you heave us a rope now?" This was complied with, and the strangers were instantly on deck, and soon explained the mystery. The name of the oldest was THURSDAY OCTOBER CHRISTIAN, the first-born on the island, and son of the identical Fletcher Christian, of the Bounty. He was about twenty-five years of age, a fine, handsome fellow, six feet high, with an open, prepossessing countenance, deep black hair, and a brownish complexion. His only dress was a piece of cloth round the loins, and a straw hat, ornamented with black feathers. His companion was George Young, a fine youth of seventeen or eighteen years of age.

Being invited by Captain Staines to go below, and take some refreshment, the interest and surprise of the officers was not a little increased when, on having provisions set before them, Christian rose up, and, placing his hands in a devotional posture, repeated, in a pleasing and serious tone of voice, *For what we are going to receive, may the Lord make us truly thankful.*

From these youths they learned that only one of the mutineers, namely, Smith, who had assumed the name of John Adams, was alive, and that he was then on the island. Accordingly, as soon as the two young strangers had gratified their curiosity about the ship, Captain Staines accompanied them on shore, where they were met by Adams and his wife, who was old



MATTHIAS.

The above likeness of Matthias was sketched from life, at *his rooms* at the upper Police. He is drawn as he appeared before the artist, dressed in his pontifical robes, with his rule in his right hand, and his two-edged sword in the left. He is covered with an olive cloak of exceedingly fine broadcloth, lined and faced with silk and velvet. Underneath this, he wears a brown frock coat, with several silver stars on each breast; the points upon the collar are finely wrought with gold tinsel upon a ground of fine velvet, and upon his left breast appears a splendid golden star. His belt is of white cloth fastened by a golden clasp, surmounted by an eagle. The splendid two-edged cut-and-thrust that he wears at his side, has a blade of the finest Damascus steel, a golden sheath, gold chain and mountings, and a finely carved ivory handle. The cocked hat, which he occasionally puts on, is a triangular black beaver, trimmed with green, and the rear angle is surmounted by the golden symbol of glory.

The history of this individual, although fraught with knavery and delusion, is worthy of attentive interest and contemplation. Whenever religion is attacked, and its principles threatened with subversion by false and blasphemous assumption of divine power, and pretended commissions from heaven, Christians should be watchful, lest the grounds of their faith get undermined, and the weak and unwary should suffer imposition and bewilderment. And whenever the human mind exhibits extraordinary phenomena, developing evil biases, as singular and extensive in their controlling results, as itself is mysterious in operation and successful in determined purpose, every individual may imbibe lessons of instruction which cannot too soon be carried into practice, and ought never to be neglected. As the world is constituted, and fallible as are the faculties with which we are endowed, to understand our true relations and to guide our footsteps; and dependant as we are upon the dearly bought instruction of experience for that little wisdom which is necessary to qualify our relations here, how cautiously should we yield to the control of human judgment! how distrustful should we be even of our own reasonings and impulses, especially in relation to those matters which the inscrutable designs of an overruling Providence have placed beyond the ken of our limited comprehension! Frail, ignorant, and full of sympathies easily excited, how liable are we to be led by the artful into the bewildering labyrinth of errour, and to become entrapped and ruined by the deceitful and the designing! The histories of fanaticism and imposture, are but the mournful records of examples illustrative of this weakness in human nature. The history of mania and insanity is likewise replete with instances, which show that the hallucinations of the mind are under certain circumstances contagious; for in proportion as the visionary speculations of insane persons are heeded by others, or in proportion as a certain class of erroneous impressions are allowed control, will they bewilder the mind; and especially when those impressions intimately or deeply affect our hopes and fears in relation to a future life. Once enticed into errour, and indulging ourselves in illusive visions, we soon become bewildered, losing sight of the true nature and fitness of things and the methods of happiness; we are ruined, and that without remedy!

After these preliminaries we will relate what we know of Matthias, his history, professions and practices.

A short time since Matthias was arrested in Albany, brought to this city and taken before the police, charged principally with having obtained goods under false pretences. On being asked where his residence was, and what was his occupation, he replied:

"I am a traveller, and my legal residence is Zion Hill, Westchester county; I am a Jewish teacher and priest of the Most High, saying and doing all that I do, under oath by virtue of my having subscribed to all the covenants that God hath made with man from the beginning up to this time. I am chief high priest of the Jews of the order of Melchisedec, being the last chosen of the twelve apostles, and the first in the resurrection which is at the end of 2,300 years from the birth of Mahomet, which terminated in 1830, that being the summit of the power of the false prophet. I am now denouncing judgment on the Gentiles, and that judgment is to be executed in this age. All the blood from Zaccharius till the death of the last witness, is required of this generation. Before this generation passeth away, this judgment shall be executed and declared. The hour of God's judgment is come."

From his own statement it appears, he is 46 years old, and was born in the town of Cambridge, Washington county in this State. He is a carpenter by trade; and several years ago was head workman in that business under one of the present aldermen in this city. As is represented, he was a skilful and ingenious workman, and of sober and industrious habits. What immediate causes operated upon his mind, or what motives induced him to forsake his regular and usual habits, and adopt that eccentrick course which is now notorious, we have been unable to ascertain. He commenced his singular publick career at Albany about the year 1830, where he proclaimed himself "The Prophet of the God of the Jews," and asserted divine power. It is not probable that he succeeded in making any converts to his doctrines at Albany; for shortly after, leaving a wife and daughter in that city, he came to New York and proclaimed his doctrines here. And for the last three years he has been known here as a pretended Jewish preacher, putting forth his sentiments at all times and in all places, and has been once or twice arrested and imprisoned for preaching in the streets, by means of which riotous assemblages were drawn together. He undoubtedly met with little success at first; but it appears that in the autumn of 1832 he had ingratiated himself into the favour of a number of individuals, among whom were three of the most wealthy and respectable merchants of Pearl street. He represented himself to them to be the Spirit of Truth which had disappeared from the earth at the death of Matthias mentioned in the New Testament; that the spirit of Jesus Christ entered into that Matthias, whom he now represented, having arisen again from the dead. This blasphemous impostor pretended to possess the spirit of Jesus of Nazareth, and that he now at this second appearance of the spirit, was the Father, and had power to do all things, forgiving sins, and communicating the Holy Ghost to such as believed on him. And what was most astonishing and unparalleled, these men who were before professors of the Christian religion, were blind enough to believe and confide in all he imposed on them.

So completely did he succeed in deluding these men and in impressing them with the belief that he was actually a high priest of the order of the mysterious Melchisedek upon a divine mission to establish the kingdom of God upon the earth, that he obtained entire control over them, and their estates. "I know the end of all things," was he wont to assert, illustrating it by placing a piece of paper in a drawer leaving one end upon the outside, and saying, 'you can see but one end of the paper, and so the world sees; but I see the whole length of it.—I see the end.' But whenever he was unable successfully to overawe his listening dupes, by surprising them with new revelations of his divine attributes and power, he would awaken their fears by threats of judgment and eternal condemnation, and seizing the opportunity which terrour presents, he would bend them to his purpose by a profusion of promises. At these times when he knew his triumphs were most complete over the mind, he found it convenient to represent his poverty and want of money—that the world persecuted him, and it was instigated to do so by the devil, because there was no truth in the world except in him, Matthias; that he had commenced the reign of God upon the earth, and although the devil had succeeded in suspending for a time its permanent establishment, he was now going on to overthrow the devil and to establish Zion. Subject however as he was to personal inconveniences, and the evils of the mortal shape which he had assumed, he found it necessary to call upon those who saw the truth as he did, to contribute of their substance for his support and the promotion of the kingdom. If they refused to provide him whatever money he desired, he threatened to visit upon them, (which he declared he had the power to do) the wrath of the Almighty; but if they believed in him and obeyed him in all things, he promised them they should be called into the Kingdom, and he would forgive all their sins, and they should enjoy eternal happiness. Impudent and blasphemous as such language and pretensions truly are, the intended effect was produced, and Matthias received new encouragement by the gratification of pecuniary abundance. This object gained, he was enabled to adorn his person with costly apparel, and to obtain other appurtenances and furniture which he thought were necessary, that all things might correspond to the nature and dignity of the office which he had assumed.

In August, 1833, two of his friends and proselytes, Messrs. Pierson and Folger, were residing at Sing Sing, Westchester Co. Thither about that time Matthias repaired and took up his residence with Mr. Folger and family. After the lapse of a week, Matthias came to the conclusion that his dwelling place did not correspond with his character, and accordingly suggested to Folger and Pierson that it was their duty to hire him a house which he might consecrate entirely to himself. In this he was accommodated, as it appears without hesitation, and indeed with the acknowledgment that the request was reasonable. More reasonable and proper however did it soon appear to Matthias' mind, that his habitation should not be subject to worldly interests or infidel intrusion; and accordingly presumed to require of his two obedient followers the purchase of a house to be exclusively his own! With this request they agreed to comply. Before it was accomplished however, Matthias manifested some new attribute of his character, and accompanied the revelation by an effort to make Folger believe that the house in which he then resided at Sing Sing, and had purchased sometime previous for the use of himself and family, was purchased at the instigation of the Spirit of Truth, for him, Matthias; Folger having been the instrument under the influence of that Spirit for that purpose! So complete was Matthias' control, that Folger believed even this! And having resided with Messrs. Folger and Pierson about two months, he took *this* house thus miraculously purchased into his own especial charge. Matthias then required these gentlemen to give him an account of their property; and having obtained this statement which exhibited their easy circumstances, he required them both to enter into an agreement to support him, assuring them they should receive the continued blessing of God by so doing. This agreement was accordingly entered into, and Matthias enjoyed the full benefits of it, until the month of March last, when Mr. Folger became bankrupt. The wants of this daring impostor were supplied however by Pierson who resided with him at Sing Sing, until August last, when Mr. Pierson died. This event took place under very suspicious circumstances. We understand that a short time previous to his death and while in health, Matthias prevailed upon Mr. Pierson to assign to him his whole estate. And indeed Matthias himself stated at his examination, that Messrs. Folger, Pierson, and Mills, frequently declared to him that they believed him to be the *Father*, and that he was qualified to establish God's Kingdom on earth, and that Zion Hill, which was the place miraculously purchased at Sing Sing, was transferred to him for that purpose, together with horses, carriages and furniture, of a house in Third St. New York—that it was also agreed that the house and lot in Third street should be conveyed to him; and that Mr. Pierson directed a deed to be made out accordingly, but died before it was completed—he still claimed the property as his own for the original purpose, and considered it the beginning of the establishment of the kingdom. It is certain that Mr. Pierson was suddenly taken sick, and it is supposed immediately after this 'contract' was made. He fell under the care of Matthias, who would neither allow his friends to visit him, nor to call medical aid, declaring himself to "*have power of life and death.*" Mr. Pierson's body having been removed to New Jersey for interment, a *post mortem* examination was taken by four respectable physicians, all of whom certified that they found in Mr. Pierson's stomach a "*large quantity of an unwholesome and deadly substance.*" A warrant has been issued against Matthias since his first arrest, charging him with having poisoned Mr. Pierson, and this charge it is believed will be supported by evidence.

After the death of Mr. Pierson, Matthias came to the city of New York, and entering the family of Mr. Folger continued to reside with him until the middle of last September. About that time the mysterious death of Mr. Pierson, and the attending circumstances, having shaken the confidence of Mr. Folger and his family, they began to be conscious of their delusion, and resolved to abandon Matthias and his principles. On announcing this determination to Matthias, he resorted to his old practices of threats and promises, and told them that 'they must not throw him destitute on the world; that if they did so the blessing of God would depart from them, and sickness and perhaps death would follow; but that if they gave him money to support him, the blessing of God should continue to them.' Mr. Folger having become bankrupt, Matthias was perhaps willing to leave him; not however without first having insisted upon a supply of money, which he obtained to the amount of $630, and immediately left the city. On the morning of that day Matthias partook of a very little breakfast, and scarcely tasted the coffee, alleging as an excuse that he was ill. Immediately after breakfast, Mr. Folger, his wife, and children were taken sick. Mr. Folger did not suspect the cause of their illness until after Matthias had left the city; when, upon examination, he learned that the black woman who did the cooking for the family, had also abstained from the use of coffee that morning, and from other circumstances he became confirmed that the woman was bribed by Matthias to poison the family! The effort was unsuccessful, the poison producing but a temporary sickness. This nefarious transaction induced Mr. Folger to procure the arrest of Matthias, firmly convinced at this melancholy stage, that he was a *base Impostor.*

The third gentleman named as one of the dupes of Matthias, became a lunatick under this unfortunate delusion. But on a removal to the country and from the influence of the 'Prophet,' he recovered, and is now convinced of his lamentable errour.

By recent developments it appears, that Matthias had received in the aggregate from these gentlemen about $10,000 in money and negotiable paper, which he had appropriated, as he says, in furnishing the establishment at Zion Hill, and in Third street. "I have always declared," said he on his examination, "that I could receive nothing from them as if their property; but that if they felt as though they had in their possession property which they believed belonged to God, and if they believed that I was the servant of God, then they could give me of that property whatever they pleased; and I have never received any property or money from any person in any other way, since I commenced preaching the everlasting gospel." But by whatever means he obtained money, it is evident he used it for the wildest and most extravagant purposes. Besides those things which we mentioned at the outset as adorning his person, his wardrobe was bountifully supplied with new boots, shoes and pumps; linen shirts of the most exquisite fineness, the wristbands fringed with delicate lace; silk stockings, handkerchiefs and gloves; a green frock-coat heavily embroidered with gold; merino morning dresses, and two caps made of linen cambrick, folded in the form of a mitre, richly embroidered—one with the names of the twelve apostles written around it, and "Jesus Matthias," adorning the front in prominent characters; the other surrounded with the names of the twelve tribes, the front like the other. Though Matthias professes to be a priest after the order of Melchisedek, yet he seems to have somewhat imitated in his habiliments the priests of the order of Aaron. (See Josephus l. 3. c. 7. Exod. c. 28.) As to Melchisedek, Adam Clarke says, "who this person was, must remain a secret. We know nothing more of him than is written in Gen. xiv. 18. &c. in which this very mysterious person is represented as a type of Christ." (See also Ps. 110. Heb. 5 and 7.) With his two-edged sword Matthias was to destroy the Gentiles, as Gideon did the Midianites. With his six feet rule he was to measure the New Jerusalem, 'the gates thereof, and the walls thereof,' and divide it into lots for those who believed on him, and obeyed the Spirit of Truth, as it came from him, the trumpet. With the golden key which he possessed, he was to unlock the gates of Paradise.

Somewhat versed in the antiquities and inexplicable rites of the Jews, this impostor unites to a quick and active mind, a considerable cunning, a fluent speech, and a vast deal of persevering impudence; endeavouring to impress his dogmas by assuming a sanctified and uncompromising air, and fixing upon his victim invariably his remarkably fierce and penetrating eyes. He reasons plausibly and ingeniously, and is exceedingly subtle at evasion. This however, taken into view with the absurdity of his general schemes, will give him no more merit than a maniack possesses in that respect. "A remarkable peculiarity," says Abercrombie, "in many cases of insanity is, a great activity of mind, and rapidity of conception,—a tendency to seize rapidly upon incidental or partial relations of things,—and often a fertility of imagination which changes the character of the mind, sometimes without remarkably distorting it." Although Matthias has this acuteness of mind, and seems to have a control over it, yet in all his philosophy it seems remarkably distorted. His doctrines are all opposite to those commonly received; as for example, he considers "the seat of understanding to be in the belly," "casting out devils he considers vomiting up diseases of the stomach," &c., to all of which he gives a plausible support. He is undoubtedly insane, and perhaps actually believes himself to be, all that he professes to be. But it is certain that he has made a diabolical use of what art or power he has, which is less to be wondered at than the effects are to be regretted. Although Matthias never could have obtained an extensive and permanent influence, even if his knavery had not been detected, since his schemes were too wild and incoherent and his demands too absurd to produce an effect that would endure beyond his actual and immediate presence; yet that his blasphemous pretensions should have gained credence among intelligent minds is to be lamented; and the whole history of these transactions will form a dark page in the records of modern fanaticism, and will present an enduring but melancholy evidence of the weakness of human nature.

SKELETON OF THE FOSSIL DEER.

When and *where*, did this gigantick species of deer exist? Such is the question which arises at once to every man's mind—yet nothing but mere conjecture can be given in reply. No tradition of its actual existence remains: yet so frequently are bones and antlers of enormous size dug up in the various parts of the island, that the peasantry are acquainted with them as the "old deer," and in some places these remains are so frequent, that they are often thrown aside as useless lumber. A pair of these antlers were used as a field gate near Tipperary. Another pair had been in use for a similar purpose near Newcastle, in the county of Wicklow, until they were decomposed by the action of the weather. There is also a specimen in Charlemont

House, the town residence of the Earl of Charlemont, which is said to have been used for some time as a temporary bridge across a rivulet in the county Tyrone. Now, though similar remains have been found in Yorkshire, on the coast of Essex, in the isle of Man, in different parts of Germany, in the forest of Bondi, near Paris, and in some parts of Lombardy, it is evident that the animal had its favourite haunts in our fertile plains and valleys, and has some claim to the title of the *Irish* fossil deer. Thus one part of the question is answered—we can tell *where* the animal existed, as far as extreme probability can go, but as to *when*, it baffles our investigations.

What could be the use of the immense antlers with which the animal was furnished? It is evident that they would prevent it from making any progress through a country thickly wooded with trees, and that the long, tapering, pointed antlers were totally unfit for lopping off the branches of trees, a use to which the elk sometimes applies his antlers, and for which they seem well calculated. It is said that the elk, when pursued in the forests of America, will break off branches of trees as thick as a man's thigh. But the antlers of the fossil deer seem to have been given to it for its protection, a purpose for which they doubtless have been admirably designed; for their lateral expansion is such, that should occasion require the animal to use them in his defence, their extreme tips would easily reach beyond the remotest parts of his body; and when we consider the powerful muscles for moving the head, with the length of the lever afforded by the antlers themselves, we can easily conceive that he could wield them with a force and velocity which would deal destruction to any enemy having the hardihood to venture within their range.

There is presumptive evidence that MAN existed at the same period with this animal—one proof of which seems to be in a rib of the deer (presented to the Society by the same gentleman who presented the skeleton,) and which has evidently been perforated with an arrow, or some similar sharp pointed instrument. It is not improbable that the chase of this gigantick creature formed part of the business and pleasure of the then inhabitants of the country, and that amongst its enemies might be included the Wolf, and the celebrated Irish Wolf Dog.—*Dublin Penny Journal.*

AERONAUTICKS.

The art of sailing in, or navigating the air. The idea of inventing a machine, which should enable us to rise in the air, appears to have occupied the human mind even in ancient times, but was never realized till the last century. The first suggestion for a sailing vessel with any pretensions to the character of science, is due to Francis Lana, a distinguished jesuit. This occurred in 1670.

Lana proposed to support his car by the aid of four balls. These were to be exhausted of air; and the inventor argued that their diminished weight would cause the balls to support themselves and the aeronaut. We notice this apparatus, as similar schemes have been put forth even within our own times; but it must be obvious to any intelligent mind, that the external pressure of the atmosphere would destroy the vessels, even if they could be rendered light enough. Henry Cavendish, having discovered, about 1766, the great levity of inflammable air or hydrogen gas, Dr. Black, of Edinburgh, was led to the idea that a thin bladder, filled with this gas, must ascend into the air. Cavallo made the requisite experiments in 1782, and found that a bladder was too heavy, and paper not air tight. Soap bubbles, on the contrary, which he filled with inflammable air, rose to the ceiling of the room where they burst. In the same year, the brothers Stephen and Joseph Montgolfier constructed a machine which ascended by its own power. In Nov. 1782, the elder Montgolfier succeeded, at Avignon, in causing a large bag of fine silk, in the shape of a parallelopiped, and containing 40 cubick feet to mount rapidly upwards, to the ceiling of a chamber, and afterwards, in a garden, to the height of 36 feet, by heating it in the inside with burning paper. The two brothers soon afterwards repeated the experiment at Annonay, where the parallelopiped ascended in the open air 70 feet. A larger machine, containing 650 cubit feet, rose with equal success. They now resolved to make the experiment on a large scale, and prepared a machine of linen, lined with paper, which was 117 feet in circumference, weighed 430 pounds, and carried more than 400 pounds of ballast. This they sent up, June 5, 1783, at Annonay. It rose in ten minutes to a height of 6,000 feet, and fell 71,688 feet from the place of ascension. The method used to cause it to ascend was, to kindle a straw fire under the aperture of the machine, in which they threw, from time to time, chopped wood. But though the desired effect was produced, they had no clear nor correct idea of the cause. They did not attribute the ascension of the vessel to the rarefaction of the air enclosed in it by the operation of the heat, but to a peculiar gas, which they supposed to be developed by the burning of the straw and wood. The errour of this opinion was not discovered till a later period. These experiments roused the attention of all the philosophers of Paris. It occurred to some of them that the same effect might be produced by inflammable air. M. Charles, professor of natural philosophy, filled a ball of lutestring, 12 feet in diameter, and coated with a varnish of gum-elastick, with such gas. It weighed 25 pounds, rose 3,123 feet in two minutes, disappeared in the clouds, and descended to the earth, after three-quarters of an hour, at the village of Gonesse, about 15 miles from Paris. Thus we see two original kinds of balloons; those filled with heated air, and those filled with inflammable air.

The common mode of filling balloons on a small scale, is to generate hydrogen gas in a bottle, by pouring dilute sulphurick acid on granulated zinc, but the acid speedily destroys the balloon. To prevent this, the experimentor has only to employ a second bottle containing water, and carry a bent pipe from the first bottle through a cork in the second, it dips beneath the surface, and is condensed, and the pure hydrogen ascends by the second pipe to the balloon.

To continue: Montgolfier had gone to Paris, and found an assistant in Pilater de Rozier, the superintendent of the Royal Museum.—They completed together, in Oct. 1783, a new machine, 74 feet in height, and 48 in breadth, in which Rozier ventured for the first time to ascend, though only 50 feet. The balloon was from caution fastened by cords, and soon drawn down.

Eventually the machine, being suffered to move freely, took an oblique course, and at length sunk down gradually about 100 feet from its starting place. By this the world was convinced that a balloon might, with proper management, carry a man through the air; and the first aerial expedition was determined on.

Nov. 21, 1783, Pilatre de Rozier and the Marquis d' Arlandes ascended from the castle la Muette, in the presence of an innumerable multitude, with a machine containing 6,000 cubick feet. The balloon, after having attained a considerable height, came down in 25 minutes, about 9,000 yards from la Muette.—But the daring aeronauts had been exposed to considerable danger. The balloon was agitated very violently several times; the fire had burnt holes in it; the place on which they stood was injured, and some cords broken.—They perceived that it was necessary to descend without delay; but when they were on the surface of the earth, new difficulties presented themselves. The weak coal fire no longer supported the linen balloon, the whole of which fell into the flame. Rozier, who had not yet succeeded in descending, just escaped being burnt. M. Charles, who had joined with M. Robert, soon after informed the publick that they would ascend in a balloon filled with inflammable air. To defray the necessary expense of 10,000 livres, he opened a subscription. The balloon was spherical, 26 feet in diameter, and consisted of silk, coated with a varnish of gum-elastick. The car for the aeronauts was attached to several cords, which were fastened to a net, drawn over the upper part of the balloon. A valve was constructed above, which could be opened from the car, by means of cords, and shut by a spring. This served to afford an outlet to the inflammable air, if they wished to descend, or found it necessary to diminish it. The filling lasted several days; and, Dec. 1, the voyage was commenced from the gardens of the Tuilleries. The balloon quickly rose to a height of 1800 feet, and disappeared from the eyes of the spectators. The aeronauts diligently observed the barometer, which never stood at less than 26 degrees, threw out gradually the ballast they had taken in to keep the balloon steady, and descended safely at Nesle. But as soon as Robert stepped out, and it was thus lightened of 130 pounds, it rose again with great rapidity about 9,000 feet. It expanded itself with such force, that it must have been torn to pieces, had not Charles, with much presence of mind opened the valve to accommodate the quantity of gas to the rarity of the surrounding atmosphere. After the lapse of half an hour, the balloon sunk down on a plain, about three miles from the place of its second ascent.

Another ascent, which nearly proved disastrous to the aeronauts, may now be noticed. On the 15th of July, 1784, the Duke of Chartres, the two brothers Roberts, and another person, ascended with an inflammable-air balloon from the Park of St. Cloud, at 52 minutes past 7 o'clock in the afternoon. This balloon was of an oblong form, measuring 55½ feet in length, and 34 in diameter. It ascended with its greatest extension nearly horizontal; and after remaining in the atmosphere about 45 minutes, it descended at a little distance from whence it had ascended, and at about 30 feet distance from the *Lac de la Garenne*, in the park of *Meudon*. But the incidents that happened in this aerial excursion deserve to be particularly described, as nothing like it had happened before to any of the aerial travellers. This machine contained an interior smaller balloon filled with common air; by which means, according to a mode hereafter to be mentioned, the machine was to be made to ascend or descend without any loss of inflammable air or ballast. The boat was furnished with a helm and oars, intended to guide it, &c.—*Brit. Cyc.*

STEEL PENS change red ink to a jet black. The quill should only be employed in using this ink.

Muriatick acid turns black ink to a beautiful red.

TO OUR READERS.

With this number we close our Mythological department. Those who have followed us, from the beginning through this interesting branch of knowledge, are now possessed of the whole circle of eastern Mythology. And those who have interested themselves in it, will be able not only to understand the heathenish institutions and their history, but will be able to appreciate the classick allusions which embellish and illustrate poetry and eloquence. And indeed if opportunity should elicit the effusive efforts of their own intellects, they will be able perchance to adorn truth in its presentation with graces borrowed from these classick remembrances. At any rate they will be upon a par in this respect with college scholars, and able to contend on these matters against the imposition of pedantry.

Geography will take the place of Mythology, and we flatter ourselves, that we shall present to the reader and student as good and comprehensive a system of Geography as has ever been published. If the best system can be collected from the combined learning and records of Malte-Brun and Bell, Myers, Morse, and Goodrich, and from the journals of modern exploratours and travellers, we assure the reader that no effort on our part shall be wanting to accomplish it.

ITEMS OF INTELLIGENCE.

Mr. Coleridge the Poet died at Highgate on the 25th day of July last. A month or two before his death, he wrote his own humble and affectionate epitaph.

"Stop, Christian passer-by! Stop, child of God,
And read with gentle breast. Beneath this sod
A poet lies, or that which once seemed he;—
O, lift a thought in prayer for S. T. C.!—
That he who many a year with toil of breath
Found death in life, may here find life in death!
Mercy for praise—to be forgiven for fame
He asked, and hoped through Christ. Do thou the same."

An equestrian bronze statue of his late Majesty, George the Fourth, has been recently completed by Chantrey, at the cost of 9,000 guineas. It is to be placed over the grand marble entrance in St. James's Park. The magnificent gates to he fixed to the archway, enriched with mosaick gold, are said to be the most splendid in Europe—the cost of the whole entrance when completed will be upwards of $300,000.

26,208,000 sheets are printed annually in France, and put into a book form, for the gratification of French readers.

The pageant of the Ærial ship at Paris, recently, proved a failure, to the great disappointment of thousands of spectators. After it had ascended a short distance, it suddenly turned topsy-turvy, and burst with a tremendous explosion! It fell into the hands of goths who tore it in pieces.

If light and heat be matter, they must be matter in a state of far more minute division than we can ever observe with our best glasses. Were the atoms of the size of the grains of dust floating in the atmosphere, invisible to the naked eye, they would tell upon the earth like cannon-balls, and it would have been long ere this pounded into dust.

Air, by being compressed, has been made twice as heavy as water.

Water confined in a boiler, and intensely heated becomes red-hot.

Savages light their fires by rubbing two pieces of wood. Forests have been burned down by fires kindled by the violent friction of the branches against each other by the wind. Iron has been made red-hot by being struck a few blows with the hammer. Air may be condensed by pressure so as to set tinder on fire. Pieces of ice have been melted by being rubbed together, when the air was cooled many degrees below the freezing point, and great quantities of water have been made to boil by a blunt borer rubbing against a mass of metal immersed under the water.

A fish in Java called the jaculator, catches flies and insects by spirting water from its mouth, and seldom misses its aim at the distance of five or six feet, bringing down a fly at a single drop.

Since the commencement of the working of the gold mines, that run in a mineral belt, it may be said, parallel to the course of the Blue Ridge, from Georgia to Maryland, gold has been obtained to the amount of no less than 6,000,000 of dollars.

A captain of one of the companies of the western Dragoons, states that the village where the recent conciliatory council was held with 8,000 of the Kioway, Camanche, and Waco Indians, is situated on a large branch of the Red River, whose waters are *as salt as the sea*. They derive their saltness from a cliff near the banks containing mountains of salt rock which can be used without any preparation whatever.

SECTION XXVI.

HISTORY.

THE ISRAELITES.

The History of the Israelites now assumes a very marked and interesting character. Having lived in Egypt for about two hundred and fifteen years, as Josephus and other historians assert, groaning towards the close of that period especially, under the unrighteous bondage and oppression of the Egyptian king, who imposed upon them those intolerable tasks and hardships enumerated in the first of Exodus, they were now destined to throw off their chains, and to experience a divine deliverance. Moses, who was appointed to be their deliverer had fled into Midian to escape the envy and ingratitude of the Egyptians after having led them successfully against the Ethiopians. He had remained there about forty years, having married one of Jethro's daughters, and it is believed written the book of Job during the interval. Near the end of this long retirement, it is related, that, "the angel of the Lord appeared unto him in a flame of fire, out of the midst of a bush; and he looked, and behold, the bush burned with fire, and the bush was not consumed." This was the commencement of that series of miracles which the Divinity saw fit to employ in the deliverance of the Israelites. From out of this burning bush the voice of God revealed to Moses the design of using him as the instrument. Moses seems to have been at first exceedingly distrustful of his abilities in accomplishing this undertaking against the obdurate and selfish Pharaoh. But the Lord having inspired him with the divine power of working miracles, and having promised to be with him, and to assist him "in his words, when he was to persuade men, and in his deeds, when he was to perform wonders;" Moses' confidence increased, and he became convinced of the certainty of his mission. Accordingly Moses took his wife and two children, and set out for Egypt. On his way he met his brother Aaron who had been sent by divine command.

Having arrived in the country inhabited by the Hebrews, they communicated to them the command of God, concerted their measures, and presented themselves before the king of Egypt. "We are sent," said they to him, "by the Lord God of Israel, who commands his people, under pain of the severest punishments, to go three days' journey into the desert to celebrate a festival in his honour, and offer him sacrifices." "But Pharaoh said, who is the Lord, that I should obey his voice to let Israel go? I know not the Lord, neither will I let Israel go." To prove more evidently his contempt of this command, he oppressed the Israelites with additional hardships and new deprivations. The latter, who, relying on the word of Moses and Aaron, now expected a speedy deliverance, broke out into murmurs and complaints. "And they said unto them, the Lord look upon you, and judge; because ye have made our savour to be abhorred in the eyes of Pharaoh, and in the eyes of his servants, to put a sword in their hand to slay us. And Moses returned unto the Lord, and said, Lord, wherefore hast thou so evil-entreated this people? why is it that thou hast sent me? For since I came to Pharaoh to speak in thy name, he hath done evil to this people; neither hast thou delivered thy people at all:" (Exod. vi. 5.) But God satisfied Moses, that the Israelites should be obedient to him, and he should be able to work such miracles as should at last convince the incredulity of Pharaoh. This was after Moses had exhibited to Pharaoh the wonder of changing his rod into a serpent, which that king believed to be nothing more than the art of a skilful juggler; therefore they were more astonishing miracles now that Moses was to be empowered to work, to bring his countrymen to obedience, and the king of Egypt to consent that he should lead them out from the affliction of tyrannical injustice, "unto the land of the Canaanites, and the Hittites, and the Amorites, and the Perizzites, and the Hivites, unto a land flowing with milk and honey."

These miracles were the infliction of the memorable ten plagues upon the Egyptians, to punish the obstinacy and hardheartedness of their rulers; and they were the most extraordinary manifestations of the Divine power to man, and through man, that occurred antecedent to Christ. And the conduct of Pharaoh during these events as related in all history, sacred and profane, who knew the wishes of God as well as the ruinous consequences of such conduct if persisted in, presents a tissue of folly, blindness and obstinacy unparalleled in the history of the world. It was not enough that all the waters of Egypt should be changed into blood, sickening and distressing every Egyptian who tasted them; it was not enough that innumerable multitudes of frogs should overspread the land, and infest his houses, his sleeping and his eating places with loathsomeness and filth: it was not enough that the dust should become lice throughout the fields of Egypt to torment and kill both man and beast; nor that the air should be filled with flies which spoiled and corrupted every thing they approached; these had not the power to change the mind of Pharaoh permanently, although his obstinacy relented while these plagues were immediately afflicting his country; yet as soon as it was relieved of them he was base enough to revoke what he had promised, and return to his old determination. But the cattle were smitten with a grievous murrain, and all the cattle of Egypt died. The men were infected with fetid and dangerous diseases. The heavens were obscured with clouds, that poured forth torrents of rain and hail, while lightnings and thunder filled every heart with dismay. All Egypt was laid waste, and the little verdure which remained became the prey of swarms of locusts, that came at the call of Moses. During several days this unhappy country was enveloped in darkness so intense that there seemed reason to fear the sun had disappeared for ever; while at the same time there was light in the land of Goshen, where the Israelites were, and which was entirely exempt from all these plagues. (Exod. ix. 26.)

The last terrible prodigy remained, of which Moses informed the king, at the same time directing the Israelites to be ready to depart at the moment this last thunderbolt should fall upon the Egyptians. In the same night the destroying angel smote all the first-born of Egypt, from the eldest son of the monarch on the throne to the offspring of the meanest of his subjects, and even of the cattle, so that there was a general mourning throughout Egypt. The Israelites took advantage of this circumstance to leave Egypt. But Moses first caused them to celebrate a feast, which they called a Passover, "because," says Josephus, "on that day God *passed us over;*" this festival was likewise called 'Pascha.' They received a command to repeat it every year in the dress of travellers, with a white staff in their hands, and their long garments girt around them, that they might be prepared for walking. After having received a great variety of rich gifts or loans from the Egyptians, who now seemed glad to have them go, they were prepared for the march, numbering amongst themselves 600,000 men able to go to war. Moses was eighty years old, and Aaron three years older; and they took out the bones of Joseph with them as he had charged his sons to do.

"When the children of Israel had completely detached themselves from the dominion of the king of Egypt, the object which, in pursuance of prophecy and the divine command, they had to accomplish, was to march to the borders of that pleasant land—the land of Canaan—which had been promised of old to them, through their great ancestor Abraham. The direct road to Palestine from Rameses, the chief seat of the Hebrews in Egypt, and probably the same as Goshen, was to the north, by the line of the Mediterranean Sea; and the march in this direction, if unopposed, might probably have been performed in the course of four or five weeks. But all this district, or at least the part of it adjoining the immediate boundary of the Holy Land, was inhabited by a strong and warlike people called Philistines, and we are expressly told by Moses that it was by special direction of God himself, that the Israelites declined the nearest road, and took instead of it, a turn to the south or south-west, and came to Succoth, which Josephus supposes to be the more modern Latopolis; from Succoth they advanced to Etham, at the extreme northern end of the western branch of the Red Sea. This western branch was called Sinus Horoopolites, by the ancient Greeks and Romans; and by modern nations, the Gulf of Suez. Here they were, as Moses says, on the edge of the Wilderness, or that vast desert which is situated between the rich river-soil of the Delta of Egypt, and the southern parts of Palestine. Here they had, in fact, very nearly headed the gulf, and, if escape from Pharaoh was their immediate care, the Israelites had only to proceed a day's journey right forward, and it would be obvious that the nature of the ground, and the deficiency of water, would effectually check the pursuit of a considerable army, the chief strength of which, we know to have consisted in chariots and cavalry.

"At this critical juncture, however, God commanded Moses to lead the great host of the Hebrews back again from the onward road, and encamp them farther to the south, on the west or Egyptian side of the Red Sea. The place of such encampment was pointed out before Pi-hahiroth, between Migdol and the sea. It is said that Pi-hahiroth means an opening into the mountains, and the result of much laborious investigation has been that, in fact, the Israelites were thus led into a glen or combe, in which their retreat was rendered difficult by surrounding rocks, and their advance, to all human speculation, absolutely impracticable by the sea in front. Now we are told that God gave this remarkable command to Moses, for that Pharaoh would say of the children of Israel, They are entangled in the land; the wilderness hath shut them in. 'And I, the Lord, will harden Pharaoh's heart, that he shall follow after them; and I will be honoured upon Pharaoh and upon all his host; that the Egyptians may know that I am the Lord.' Thus, therefore, the tyranny and falsehood of Pharaoh, and the idolatrous wickedness of the Egyptians, were to undergo the last and finishing act of divine retribution to be brought about and signalized by such a marvellous demonstration of the omnipotence of God over the ordinary laws and processes of the material world, as should, for the time being, strike dumb with astonishment the worshippers of birds, and beasts, and reptiles, and lifeless forms of nature, and also should remain in everlasting record, an awful proof of the unsleeping government of the Lord. May we not also surmise that, by this apparently strange direction given to the march, the faith of the leader was intended to be tried; for certainly, under the circumstances of the flight of the Israelites, and the notorious reluctance and double-dealing of Pharaoh, such a command must have seemed, at first, to Moses, whose practical acquaintance with the country cannot but be presumed, almost entirely destructive of his nearly accomplished hopes of the deliverance of his fellow countrymen.

"What God had foretold, and what Moses and the Israelites had good reason, upon human considerations, to apprehend, took place. Pharaoh collected his forces, and followed the track of the escaping host, and came within sight of them, when they were encamped before Pa-hahiroth. Thus, the Israelites were completely hemmed in. Their situation seemed desperate to the multitude; they feared the vengeance of their irritated task-masters, and in the bitterness of their spirits, they thus threw their reproaches upon Moses. 'Because there were no graves in Egypt,' said they to him, 'hast thou taken us away to die in the wilderness? wherefore hast thou dealt with us, to carry us forth out of Egypt? Is not this the word that we did tell thee in Egypt, saying, 'Let us alone, that we may serve the Egyptians?' For it had been better for us to have served the Egyptians, than that we should die in the wilderness.' And Moses said unto the people, 'Fear ye not; stand still, and see the salvation of the Lord, which he will show to you to-day; for the Egyptians whom ye have seen to-day, ye shall see them again no more for ever. The Lord shall fight for you, and ye shall hold your peace.' Upon this that mysterious pillar—of cloud by day, and of fire by night—which had hitherto appeared in advance of the Israelites, shifted its position to their rear, and stood up between them and the pursuing Egyptians. Then Moses, by divine command, stretched out his hand over the arm of the sea which ran before the camp, and immediately a strong east wind began to blow, the waters were driven back, and a dry passage appeared throughout, to the other side of the gulf. Along this awful pass the Hebrews marched during the night, and by the morning light were all safely arrived at the opposite coast. The Egyptians had witnessed this wonderful escape of their imagined victims, and in their blindness and fury, followed them into the miraculous path. But now their appointed hour was come. In the words of the sacred text, 'It came to pass that in the morning watch, the Lord looked unto the host of the Egyptians, through the pillar of fire and of the cloud, and troubled the host of the Egyptians, and took off their chariot-wheels, that they drove them heavily; so that the Egyptians said, Let us flee from the face of Israel, for the Lord fighteth for them against the Egyptians. Then the Lord said unto Moses, Stretch out thine hand over the sea, that the waters may come again upon the Egyptians, upon their chariots, and upon their horsemen. And Moses stretched forth his hand over the sea, and the sea returned to his strength when the morning appeared; and the Egyptians fled against it; and the Lord overthrew the Egyptians in the midst of the sea. And the waters returned, and covered the chariots and the horsemen, and all the host of Pharaoh that came into the sea after them; there remained not so much as one of them. Thus the Lord saved Israel that day out of the hands of the

Egyptians; and Israel saw the Egyptians dead upon the sea-shore."

It seems folly to speak of this passage of the Israelites over the Red Sea, as any thing else than a miracle; though some have attempted to refer the opening of the sea to natural causes, such as wind or tide. The fact itself has also been denied, on the ground, it is declared, that it was an impossibility for those people to pass over a sea thirty or forty miles wide in one night. But this objection is answered by travellers who state, that this sea in many places is no more than four or five miles in width. Niebuhr, the Danish traveller, thinks the place of the passage was near Suez. At this point the water is but about two miles across, and Niebuhr himself forded it. But he says that the sea must have been deeper in old time, and extended farther towards the north. Buckhardt agrees with Niebuhr. Diodorus Siculus, Mons. Thevenot, Bruce and others, from personal observation, have concluded that the passage over this sea must have been miraculous, as Moses expressly declares it to have been.

The Israelites were no sooner delivered from the Egyptians, than they began to complain against Moses for the want of food. They were now in a wilderness, and numbered according to Anquetil, 3,000,000 of persons. By a wonderful providence, they were supplied every morning except Sunday with manna, a species of condensed and substantial dew, which fell around their camp. Clouds of quails were likewise sent by God; and by the rod of Moses, water poured forth abundantly from the rocks; the pillar of fire by night, and a cloud by day accompanied them; and upon these merciful supplies did they subsist during the forty years they remained in the wilderness.

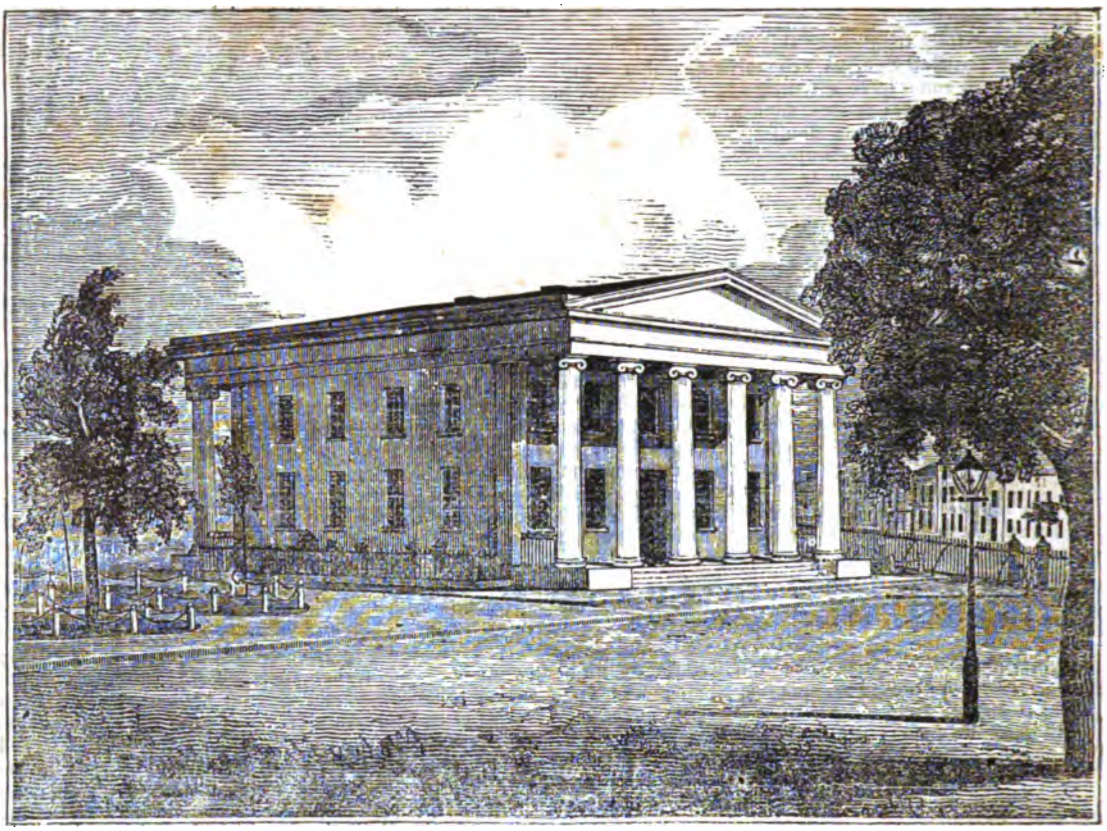
On the borders of the wilderness they were attacked by the Amalekites; but the Israelites, under the military command of Joshua, who showed himself a man of great prudence and courage, completely routed them. "The people soon after arriving at Mount Sinai, God gave them his law. During, however, the absence of Moses in the mount, they fell into idolatry, in consequence of which 3000 of them were put to death. In the course of the second year after the retreat from Egypt, Moses numbered the children of Israel from 20 years old and upwards, and there were found 603,550 men able to go to war, besides the Levites. About this time, twelve men were sent to spy the land of Canaan, who, with the exception of Joshua and Caleb, reported unfavourably, which caused the people to murmur. Upon this offence God condemned all those who were twenty years old and upwards when they came out of Egypt, to die in the wilderness, except Joshua and Caleb. As a punishment for their murmurs, the Israelites began to travel in the wilderness 1489 years B. C. At this time Korah, Dathan, and Abiram, revolting against Moses, were swallowed by the earth, with 250 of their associates. In 1452 years B. C., the Israelites began their conquests, by the defeat of the Amorites, Bashan, Moab, &c. At the age of 120 years Moses died on Mount Nebo, in the land of Moab, having first taken a view of the promised land."

The successor of Moses was Joshua, who united in himself both the military and civil government. The administration of justice appertained to the Levites, and the people were divided into tribes, decuries or tens, and families. Every individual had his fixed post in the van, the rear, or on the side of the ark, which Moses had formed to contain the tables of the law, which was in the centre; and in their battles and retreats, the same order was observed as exactly as possible. It now devolved upon Joshua to lead the people into the promised land. Having brought them to the banks of the river Jordan, the waters of that river divided and he conducted them over on dry land: from this time the cloud that had guided them disappeared. The land of Canaan into which they entered was infested with barbarous hordes, and tribes and nations of men who were inveterately inimical to them; they were the Amalekites, the Moabites, the Midianites, the Idumæans, &c. But Joshua led the chosen people successfully against them, and in the course of six years, he conquered 31 cities. Joshua died 1426 years before Christ.

"After this event, the Israelites, with some intermission, were directed by leaders, called Judges, for the space of 356 years. They paid a high respect to these officers, and also to the priests, but they acknowledged no other king than God. As the people at length became weary with this state of things, and desired a king, so as to be like the nations around them, a king was, in the divine displeasure, granted to them. The people were perpetually inclined to forsake the worship of Jehovah, and to pollute themselves with the abominations of the heathen. For this they were repeatedly brought into bondage, and consequent distress. Their Judges were the instruments of delivering them on these occasions. One occasion was as follows. The Israelites, being brought into the power of the Midianites, after seven years of suffering, they cried unto the Lord, who sent an angel to Gideon to announce to him that he was chosen to deliver Israel from their oppressors. By divine direction, Gideon retained of 32,000 men whom he had collected, only 300 men, and with them, each carrying a lamp concealed in an earthen vessel, to be broken at a proper opportunity, he so terrified the Midianites, that they fled in confusion, and turned their swords against one another. Samson also delivered his countrymen by a series of extraordinary efforts of strength and courage. At the conclusion of his course, having been betrayed by his wife, and deprived of his strength—upon its return he pulled down, by a single exertion of his muscular energy, the temple of Dagon on the heads of his enemies, the Philistines, with whom he perished in the general ruin. Samuel, the last and most eminent of these leaders, and a prophet also, rendered signal service to his countrymen, especially by the moral influence which he exercised over them. When old, however, he took for his assistants in the government, his two sons, whose mismanagement occasioned murmurs among the people, and a desire to have a king.

"Saul, the son of Kish, was the first king of Israel. Having been privately anointed by Samuel, he was afterwards publicly proclaimed, 1079 years B. C. His reign was prosperous at first, but at length was characterized by crime and ill success. He perished miserably, having spent an unhappy life, and being at war with the Philistines, had his army routed, and three of his sons slain, and he himself, having received a wound, and fearing to fall into the hands of his enemies, took a sword and fell upon it. He was succeeded by David, who, though he erred in several instances, was a man of distinguished talents, bravery, and piety; he raised his people to the highest pitch of national prosperity and happiness. David had been anointed king previously to Saul, but he at first reigned only over the tribe of Judah. But after the death of Ishbosheth, a son of Saul who had assumed the government of the tribes, he reigned over the whole of Israel. He spent a very active and perilous life, and among the conquests he made were the Philistines, the Moabites, the Ammonites, and the Syrians. He had at length some domestick troubles, and was in danger from an insurrection of his subjects; but he lived to see his enemies destroyed, and he left a rich and flourishing realm. The wise and rich Solomon was his son and successor. He laid the foundation of a magnificent temple, 1011 years B. C.

It is the ornament, and, as if the soul of history, that the relation of events is illustrated by an exposition of the causes which produced them.—*Bacon.*



HALL OF RECORD, NEW YORK.

The above engraving represents the edifice recently remodelled in this city, and appropriated for city and county offices. It is situated on Chatham street, east side of the Park, a few yards east of the City Hall, and, as it seems to us, is one of the most chaste specimens of architecture of which the city can boast. It unites strength to beauty and simplicity. Formerly the main body of the building, destitute of ornament, was made use of as the debtor's prison, and in that terrible year 1832, it was used for a Cholera hospital. The building has been made entirely fire proof, the floors being supported by arches, and composed of stone and brick. At present it contains the offices of the Register of Deeds, the City Comptroller, Street Commissioner, Surrogate, and Collector of Assessments, &c. It is 80 feet deep, 62 in width and 48 in height. The two porticoes, one at each end, are supported by six marble columns each, from the Sing Sing quarries. The walls of the building, which are stone, are stuccoed on the exteriour in imitation of marble. The style is Grecian, the model being that of the Temple of Ephesus. The accompanying view is taken from the interiour of the Park.

SOME ACCOUNT OF KOORDISTAN AND ITS INHABITANTS.

The country inhabited by the Koords is a district of central Asia, known by the name of Koordistan. It is situate on the confines of Persia and Turkey, and is bounded on the north by Armenia, on the west by the river Tigris, on the east by the plains of the Persian provinces Irak and Aderbijan, and on the south by the Turkish territories of Bagdad. The tract comprised within these limits is Koordistan, properly so called; but scattered tribes of Koords are to be found dispersed over a much wider extent of country. The general face of the soil may be soon described. It is almost one immense cluster of small mountains, occasionally intersected by loftier ranges, on the summits of which, as in every other part of Asia, there are table-lands, which, from their extreme elevation are subject to intense cold.

The most remarkable feature in the character of the people is the savage independence which they have ever maintained, during the course of twenty-three centuries. In the time of Xenophon, who mentions them under the name of the Kardouchoi, "they were a warlike nation, and not subject to the king;" and the same description is equally applicable to them at the present day. Their mountain-chiefs have indeed generally acknowledged the authority of a paramount lord; but his supremacy has never extended to the right of interference in the internal government of their country. As they form a frontier of separation between Turkey and Persia, their political allegiance is divided between the rulers of those empires. The southern and western districts profess to be subject to the Turkish government, while those that are situated more to the north and east, declare themselves to be under the protection of the king of Persia. The Ottoman Sultan, being less able than the Persian monarch to coerce a payment of tribute, or to exact military service, is therefore favoured with by far the larger share of this unproductive allegiance.

The Koords have never been united under one ruler, but the chief of each tribe exercises all the functions of a sovereign within his own territory. By far the most powerful of these feudatories is the Waly, or

THE KOORDS.

Prince, of Ardelan, a large province of Persian Koordistan. "My country," to use his own words, when addressing Sir John Malcolm in 1810, "is above two hundred miles in length, and nearly as much in breadth. We owe and pay allegiance to the kings of Persia, but we are exempted from that severity of rule which often ruins our neighbours, who possess rich plains and wealthy cities. Ardelan presents little temptation to an invader. It abounds in nothing," added he, smiling, "but brave men and hardy horses."

The habits of the Koords are those of other pastoral tribes in Asia. The mountains afford food for their flocks, in which their wealth mainly consists, and a secure abode for themselves and their families. They descend to the plains in the early spring to cultivate the land, and in summer to reap the harvest. The products of the soil are various; the valleys are highly fruitful, and, besides grain of various sorts, yield large crops of flax, cotton, tobacco, and manna, which is here the substitute for sugar.

But the grand distinguishing characteristick of the Koords, is their inordinate and determined spirit of plunder. With them plundering is a natural occupation; and every unhappy stranger, whom chance or curiosity throws in their way, they regard as their lawful prey. Should the unfortunate being happen to be poor and ragged, he is severely beaten for not having brought sufficient property to make him worth robbing. They are not only daring robbers, but skilful thieves; and their boldness is solely equalled by their address. Sir J. Malcolm, on his mission to the court of Persia in 1810, had scarcely set foot on their territory, when he was attacked, in spite of his imposing appearance, and his numerous attendants. Captain Keppel was closely watched for several miles, and narrowly escaped a similar visitation. Mr. Buckingham was less fortunate; a contribution of 2500 piastres (about 125*l.* sterling,) was levied on the caravan by which he journeyed before it was allowed to proceed.

The authority of the chiefs of Koordistan is exercised with mildness, and obeyed with cheerfulness. Its enforcement is, in all cases, attended by an extreme regard to the national customs and prejudices. A remarkable instance of this occurred when Sir John Malcolm visited Persia in 1810. "I was encamped," he says, "at a village called Zagha, situated within twenty-five miles of Sennah, the capital of Ardelan. The officer who attended as *mehmandar*, or entertainer, to the mission, on the part of the Waly, informed me, that a man of the tribe of Soorsoor (some families of which were encamped within a mile,) had, the day before, murdered his father. He will, of course, be put to death, I observed. 'I do not think he will,' said the Mehmandar; 'he is himself heir, and there is no one to demand his blood.' 'Will not the prince of the country take care that this parricide does not escape?' 'The Waly,' he coolly replied, 'cannot interfere in a case like this, unless appealed to; and, after all' said he, 'if the affair be agitated, the murder will be compounded. Among Koords, who are always at war,' he added, 'the life of an active young man is much too valuable to be taken away on account of a dead old one!'"

There are several cities in Koordistan, but the military tribes of that country seldom congregate in large encampments. The prince of Ardelan lives in great luxury and splendour in his capital, whose inhabitants mostly appear to enjoy affluence. Their condition presents a striking contrast with that of the neighbouring rude population, who glory in their wild freedom; and while they rejoice in the state and magnificence of the prince and chiefs to whom they owe hereditary allegiance, look down with pity and contempt on the less warlike, but more civilized community, by whom their rulers are immediately surrounded. Knowledge they have ever despised, and religion is scarcely known among them. They profess, indeed, the faith of Mahomet, but are, in general, as regardless of its substance as of its ceremonies. Sir John Malcolm found forty families of Nestorian Christians residing in Sennah, the heads of which, with their pastor, visited him. "There were," says the author of Sketches of Persia, "many of the same sect, the good priest informed us, in Koordistan, who had resided there ever since its separation from the Greek Church, a period of thirteen centuries; as for himself and his little flock," they had a small church at Sennah, and were as their fathers had been, not only tolerated, but protected by the princes of Ardelan."

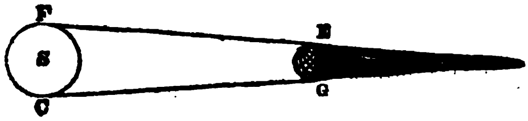
The costume of the Koords is picturesque in the extreme. The lively and varied colours of their dresses, composed of cloth, silks, and velvets, far exceed the sombre hues of the Persian cottons and sheep-skins. Their persons are equally striking, especially in the countenance, which has an originality and ferociousness of air quite characteristick. Their general appearance may be fairly estimated from the illustration prefixed to this article, which contains the portraits of three of them; the man with a spear in his hand was called *Okous*, "bull," on account of his strength.—*Sat. Mag.*

ASTRONOMY.

PHENOMENA OF ECLIPSES.

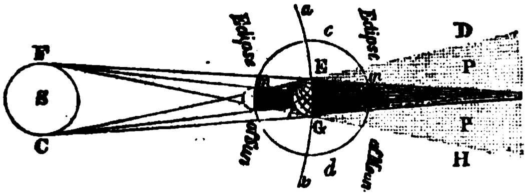
We come now to speak of certain phenomena which for a long time filled the world with terrour, but which, owing to the progress of knowledge, have at length come to be regarded only as objects of interest and curiosity.

We shall begin with eclipses of the Moon. The Earth being an opaque body illuminated by the Sun, will project a shadow behind it in space. When the Moon enters this shadow it is cut off from the direct light of the Sun, and is consequently eclipsed.



If through the extremity of the Sun's diameter we suppose straight lines to be drawn touching the surface of the Earth, as F E G C, in the above figure, these lines produced will represent the limits of the shadow; and as the Sun is much larger than the Earth, they will meet behind the latter, and will thus give to the shadow the form of a circular cone, if the Earth be spherical; and of an elliptical cone if the Earth be a regular spheroid. Accordingly, when the Moon enters this shadow, a part of its disk still remaining illuminated by the Sun, this part will not be terminated by a straight line, but will leave the form of a luminous crescent, its concavity being turned towards the shadow. The same phenomena take place as the Moon emerges from the shadow.

When the Moon approaches the Earth's shadow, it does not become eclipsed suddenly, but loses its light by imperceptible degrees. In order to comprehend this phenomena, we must remember that a small opaque body, upon being placed between an object and the Sun, does not entirely obstruct the Sun's rays, but the object becomes less illuminated on this account, and if the opaque body be sufficiently near, receives a shadow. There is then between the part which is perfectly illuminated, and that which is perfectly dark an intermediate shade called the *penumbra.*—*Biot.*



Let S represent the Sun, *Fig.* 2., *m* the Moon between the Earth and the Sun, *a* E G *b* a portion of the Earth's orbit, *e* and *f* two places on the surface of the Earth. The dark part of the Moon's shadow is called the *Umbra*, and the light part the *Penumbra;* now it is evident that if a spectator be situated in that part of the Earth where the umbra falls, that is between *e* and *f*, there will be a total eclipse of the Sun at that place; at *e* and *f*, in the penumbra, there will be a partial eclipse; and beyond the penumbra there will be no eclipse. As the Earth is not always at the same distance from the Moon, if an eclipse should happen when the Earth is so far from the Moon that the lines F *e* and C *f* cross each other before they come to the Earth, a spectator situated on the Earth, in a direct line between the centres of the Sun and Moon, would see a ring of light round the dark body of the Moon, called an Annular Eclipse; when this happens there can be no total eclipse any where, because the Moon's umbra does not reach the Earth. People situated in the penumbra will perceive a partial eclipse. According to M. de Sejour, an eclipse can never be annular longer than 12 min. 24 sec. nor total longer than 7 min. 58 sec. The duration of an eclipse of the Sun can never exceed two hours.—*Keith*, 168.

An eclipse of the Moon is *Partial*, when only a part of its disk is within the shadow of the Earth; it is *total*, when all its disk is within the shadow; and it is *central*, when the Earth's shadow falls upon the centre of the Moon's disk.

Let S represent the Sun, *Fig.* 2., EG the Earth, and *m* the Moon in the Earth's umbra, having the Earth between it and the Sun; DEP and HGP the penumbra. Now, the nearer any part of the penumbra is to the umbra, the less light it receives from the Sun. as is evident from the figure; and as the Moon enters the penumbra before it enters the umbra, it gradually loses its light and appears less brilliant.

The duration of an eclipse of the Moon, from its first touching the Earth's penumbra to the time of its leaving the penumbra, cannot exceed five hours and a half. The Moon cannot continue in the Earth's umbra longer than three hours and three quarters in any eclipse, neither can it be totally eclipsed for a longer period than one hour and three quarters. As the Moon is actually deprived of its light during an eclipse, every inhabitant upon the face of the Earth, who can see the Moon, will see the eclipse.—*Keith.*

If the latitude of the Moon, at the time of the full, is greater than the sum of its own semidiameter added to the semidiameter of the Earth's shadow, the Moon will not be eclipsed at the time; if its latitude is less than that sum, but greater than the difference, it will be partially eclipsed; and if its latitude is less than the difference, it will be totally eclipsed at the time of the full. The Moon is centrally eclipsed, only when in opposition or at the full, and in one of its nodes.

The Moon in a total eclipse, is not wholly invisible, and the phenomenon is produced by the refraction and reflection of the rays of light falling upon the Earth's atmosphere, towards the shadow, and consequently towards the Moon in the shadow.

An eclipse of the Sun happens when the Moon, passing between the Sun and the Earth intercepts the Sun's light; and the Sun can only be eclipsed at the new-moon, or when the Moon, at its conjunction, is in or near one of its nodes. For unless the Moon is in or near one of its nodes, it cannot appear in or near the same plane with the Sun; without which, it cannot appear to us to pass over the disk of the Sun. At every other part of its orbit, it will have so much northern or southern latitude, as to appear either above or below the Sun. If the Moon is *in* one of its nodes, having no latitude, it will cover the whole disk of the Sun, and produce a *total eclipse*, except when its apparent diameter is less than that of the Sun;—if it is near one of its nodes, having a small degree of latitude, it will only pass over a part of the Sun's disk, or the eclipse will be partial.

In a total eclipse of the Sun, the shadow of the Moon falls upon that part of the Earth where the eclipse is seen. A spectator placed any where in the centre, will not see any part of the Sun, because the Moon will intercept all the rays of light which come to him directly from the Sun; and it is manifest that, in this situation, the Moon, being an opaque body, will cast its shadow upon the part of the Earth where the eclipse is total. The shadow of the Moon like that of the Earth, is a cone terminated in a point; and the diameter of the Moon's shadow, where it falls upon the Earth, is equal to the difference between the apparent diameters of the Moon and Sun.

A total eclipse of the Sun is very remarkable for the degree of darkness which accompanies it, and which extends to all the points of the Earth, on which the Moon's shadow falls, precisely in the same manner as the shadow of a cloud, borne along by the wind, passes over hills and plains, and for a time deprives them of the Sun's light.

The darkness which attends a total eclipse of the Sun is the more striking, as it follows so suddenly the full splendour of day. The inferiour animals are filled with consternation. The heavens are at once enveloped in darkness; the larger stars become visible, and a pale whitish halo appears about the black disk of the Moon, which is supposed to be the Zodiacal light, or the atmosphere of the Sun. A faint light also often skirts the horizon, which is a real twilight, proceeding from portions of the Earth's atmosphere that are without the cone of the Moon's shadow and within the view of the spectator. Under the most favourable circumstances total darkness may continue eight minutes. The first ray of the Sun which escapes, darts forth like an arrow, and this deep gloom instantly vanishes.

In a partial eclipse of the Sun, a *penumbra* or imperfect shadow of the Moon, falls upon that part of the Earth where the partial eclipse is seen. The Moon's penumbra is an increasing cone, its darkness increasing towards the umbra of the Moon; and the angle of the penumbra is equal to the angle of the Sun's apparent diameter. The diameter of the penumbra, in that part through which the Earth passes, in an eclipse of the Sun, is equal to the sum of the apparent diameters of the Sun and Moon.

If the Moon, at the time of conjunction, is in one of its nodes, the eclipse of the Sun will be central. For then the centres of the Earth, Sun, and Moon, being all in the plane of the ecliptick, the centre of the Moon will pass between the Sun's centre and that of the Earth; and thus the Sun will be centrally eclipsed in the zenith, at some place on the surface of the Earth.

An eclipse of the Sun is said to be Annular, if, at the time of the eclipse, a ring of the Sun appears round the edges of the Moon; and a central eclipse of the Sun will be an annular one, if the distance of the Moon from the Earth at the time of the eclipse, be greater than its mean distance. If the orbit of the Earth and that of the Moon were both in the same plane, there would be an eclipse of the Sun at every new-moon; and an eclipse of the Moon at every full-moon. But the orbit of the Moon makes an angle of about five degrees nine minutes, with the plane of the orbit of the Earth, and crosses it in two points called nodes.

Astronomers have calculated that, if the Moon is less than 17° 12′ from either node, at the time of new-moon, the Sun may be eclipsed; or if less than 11° 34′ from either node, at the full-moon, the Moon *may* be eclipsed; at all other times there can be no eclipse, for the shadow of the Moon will fall either above or below the Earth at the time of new-moon; and the shadow of the Earth will fall either above or below the Moon, at the time of full moon.

To illustrate this, suppose the part *c d* of the Moon's orbit, *Fig.* 2. to be elevated above the plane of the paper or Earth's orbit; it is evident that the Earth's shadow at full-moon would fall below the Moon; the other part of the Moon's orbit at the same time would be depressed below the plane of the paper; and the shadow of the Moon, at the time of new-moon, would fall below the Earth. In this case, the Moon's nodes would be between E and *a*, and between G and *b*, and there would be no eclipse, either at the full or new-moon; but, if the part of the Moon's orbit between G and *b* be elevated above the plane of the paper, or Earth's orbit, the part between E and *a* will be depressed, the line of the Moon's nodes will then pass through the centre of the Earth and that of the Moon, and an eclipse will ensue.

An eclipse of the Sun begins on the western side of its disk, and ends on the eastern; and an eclipse of the Moon begins on the eastern side of the disk, and ends on the western.

The average number of eclipses in a year is four, two of the Sun, and two of the Moon; and, as the Sun and Moon are as long below the horizon of any particular place as they are above it, the average number of visible eclipses in a year is two, one of the Sun and one of the Moon.

It has been found that the greatest number of eclipses which can take place in any year is seven, and that the least number is two. When there are seven eclipses in a year five are of the Sun, and two of the Moon. When there are only two, they are both of the Sun. When there are six eclipses in a year, three of them will sometimes be of the Sun, and three of the Moon; and sometimes four of the Sun, and two of the Moon. Three is the greatest number of eclipses of the Moon that can happen in any one year. In every year, there at least two eclipses of the Sun.

When the Moon is near the first of Aries, and is moving towards the tropick of Cancer, the time of its rising will vary but little for several days together, and produce the phenomena of a Harvest-moon.

If the Moon were to move in the equinoctial, its motion in its orbit, by which it describes a revolution, in respect of the Sun, in 29 days 12 hours, would carry it every day eastward from the Sun about 12° 12′, whence its time of rising would vary daily about 50 minutes. But because the Moon's orbit is oblique to the equator, or equinoctial, nearly coinciding with the ecliptick, different parts of it make different angles with the horizon, as they rise or set; those parts which rise with the smallest angles, setting with the greatest, and the reverse. Now the less this angle is, the greater portion of the orbit rises in the same time. Consequently, when the Moon is in those parts which rise or set with the smallest angles, it rises or sets with the least difference of time, and the reverse. But in northern latitudes, the smallest angle of the ecliptick and horizon is made when Aries rises and Libra sets; and therefore, when the Moon rises in Aries, it rises with the least difference of time. Now the Moon is in conjunction in or near Aries, when the Sun is in or near Libra, that is, in the autumnal months; when the Moon rises in Aries, whilst the Sun is setting in Libra, the time of its rising is observed to vary only two hours in six days, in the latitude of London. This is called the Harvest-moon. This circumstance takes place every month; but as it does not happen at the time of full moon, no notice is taken of it. When the Moon's right ascension is equal to six signs, that is, when the Moon is in or about the beginning of Libra, there is the greatest difference of the times of rising, that is to say, about an hour and fifteen minutes. Those signs which rise with the least angle set with the greatest, and the contrary; therefore, when there is the least difference in the times of rising, there is the greatest in setting, and vice versa. All this may be pleasingly exemplified by means of a celestial globe."

The comet of 1811 was 10,900 miles in diameter, i. e. twice the bulk of the earth, and its luminous projection was 132 millions of miles.—*Schroeter*.

NATURAL HISTORY.

THE MAGOT.

"This animal is known," says Buffon, "by the name of the Barbary Ape. Of all the Apes which have no tail, this animal can best endure the temperature of our climate. We have kept one for many years. In the summer it remained in the open air with pleasure; and in the winter, might be kept in a room without any fire. It was filthy, and of a sullen disposition: it equally made use of a grimace to show its anger, or express its sense of hunger: its motions were violent, its manners awkward, and its physiognomy rather ugly than ridiculous. Whenever it was offended, it grinned and showed its teeth. It put whatever was given to it into the pouches on each side of its jaws, and commonly ate every thing that was offered to it, except raw flesh, cheese, and other things of a fermentative nature. When it slept, it was fond of roosting on a wooden or iron bar. It was always kept chained, for notwithstanding its long subjection, it was neither civilized, nor fond of its keeper: apparently, it had been but badly educated, for I have seen others of the same kind who were more sagacious, obedient, gayer, and so tractable as to be taught to dance, and suffer themselves quietly to be clothed and dressed.

"This Ape is about two feet and a half, or three feet high, in its erect posture; but the female is not so large as the male. It rather chooses to walk on all fours, than erect. When it sleeps, it is almost always sitting. There are two very prominent callosities on its posteriors. It differs also from the Pithecos; first in the form of its snout, which is thicker and longer, like that of a dog; whereas the Pithecos has a flat visage, like the human. Secondly, in having long canine teeth; instead of which the Pithecos has them no longer in proportion than those of a man. Thirdly, in its nails, which are neither so flat nor so round; and, in short, it is larger, and of a more sullen and untractable disposition than the other. It abounds in Barbary, and in the forests of India, Arabia, and Africa. In Barbary the trees are sometimes nearly covered with them.

"It is probable this is the kind of Monkey which Robert Lade speaks of in the following terms: 'We travelled over a great mountain at the Cape of Good Hope, where we diverted ourselves with hunting the large Apes, which are there in great plenty. I am not able to represent all the tractableness of these animals which pursued us, nor the swiftness and impudence with which they returned to us after we had driven them away. Sometimes they suffered us to approach so near them, that, stopping almost close to one of these animals, to take my observations, I thought myself certain of securing him, when, taking a sudden leap, he sprang above ten paces from me, and climbed up a tree with the greatest agility. They remained afterwards very quiet, looking on us as though they were pleased with our astonishment. There were some so exceedingly large, that if they had been of a ferocious nature, our number would not have been sufficient to secure us from their attacks. As it would have been useless to kill these animals, we made no use of our guns; but the captain, thinking to wound one of them, which was seated on a tree, after a long pursuit, had no sooner presented his piece, but the animal, probably from the remembrance of the execution of some of his companions, in the same manner, was so greatly terrified at it, that he fell almost motionless at our feet, and being stunned in the fall, we had not the least trouble to secure it: however, when it revived, we had occasion for all our strength and address to keep it, defending itself by biting those who were near it, which obliged us to bind our handkerchiefs over its head.'

"Tavernier tells us that some of the inhabitants of India adopt a ludicrous mode of avenging themselves on these Monkeys, who not unfrequently attack the women who are going to market, and rob them of their provisions. In an open space, near the retreat of the Apes, they place five or six baskets of rice, forty or fifty yards asunder, and near the baskets a number of stout cudgels, each two feet in length. They then hide themselves, to watch for the result. Thinking that no one sees them, the Apes hasten towards the baskets. For a while they grin angrily at each other, then approach, then retire, and seem to dread coming to action for the prey. More daring than the males, the females at length advance to the baskets, and as they thrust in their heads to eat, the males on the one side rush forward to prevent them. This brings on a general engagement, and the cudgels are lustily plied till the weakest party is compelled to seek for shelter in the woods. The victors then quietly fall to upon their hard-earned meal."

THE BABOON.

"The Baboon, properly so called, has a pouch on each side of its cheeks, capable of being greatly distended;

it has callosities on its posteriors, which are naked, and of a red colour, and are often of a large size and disgustingly conspicuous: its tail is crooked and thick, generally as long and sometimes longer than the body, but in several of the species it is extremely short. The canine teeth are much thicker and longer than those of men. Its snout is very thick and very long, terminating in a flattened extremity like that of the dog; its ears are naked, its body and limbs are strong, thick, and short; its hair is long and thick, of a reddish brown colour, and pretty uniform over the whole body. It walks oftener on all fours than upright, and is from three to four feet high; but there seems to be different sizes of these animals. The female brings forth usually but one at a time, which she carries in her arms, and in a peculiar manner, clinging to her breast: in other respects, these Baboons, although mischievous and ferocious, are not carnivorous; they principally feed upon fruits, roots and corn; they generally keep together in companies, and sally forth to commit their depredations on the neighbouring vineyards, or orchards. 'As they are extremely fond of grapes, apples, and ripe fruit, they assemble together in great numbers, and proceed on their enterprises with previous deliberation. The dogs who are set to watch do not easily conquer these animals, as they are extremely active, and make dexterous use of their teeth and claws. On these occasions a part of them enter the enclosure, while one of the company stands sentinel; the rest stand without the fence, a small distance from each other, and form a line, reaching all the way from the enclosure to the rendezvous without, which is generally in some craggy mountain. Every thing being thus disposed, the plunderers within the orchard throw the fruit to them without as fast as they can gather it: or, if the wall or hedge be high, to those that sit at the top, and these hand the plunder to those next their side.' "

THE MAIMON.

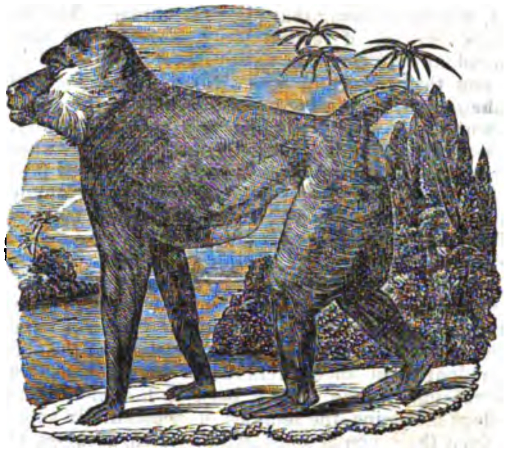
"This is a native of the banks of the Ganges, has pouches on each side of its cheeks, and callosities on its posteriors; its tail is naked, curled up, and about the length of five or six inches; the canine teeth are not much longer in proportion than those of men; the snout is very broad; the orbits of the eyes very acute above; the face, ears, hands, and feet are naked, and of a flesh colour; the hair on the body is of a beautiful greenish gray, each hair being gray and black, tipped with yellow; the extremities are gray; the region of the reins is a golden yellow; and the thighs are of a lively red. It sometimes walks erect, and at other times upon all fours; it is about two feet or two feet and a half tall when erect. It is a spiteful animal."

THE MANDRILL.

"This Baboon, which also bears the name of the Ribbed-nosed Baboon, is an ugly, disgusting animal. It is found on the Gold Coast, and in other southern provinces of Africa, where the Negroes call it *Boggo*, and the Europeans *Mandrill*. This animal is the largest of the Baboon kind. Smith relates, that a female Mandrill was given to him, which was not above six months old, and had then attained the size of an adult Baboon; he likewise acquaints us, that these animals walk always erect; that they sigh and cry, like the human species; and they never fail to overcome women when the find them within their reach.

"This animal is equally remarkable for its variety of colour, its singularity of appearance, its immense strength, and its unconquerable savageness. "Under its projecting forehead,' says Mr. Bingley, 'are two small and vivid eyes, situated so near to each other that their position alone gives to the physiognomy an air of ferocity. An enormous muzzle, indicative of the most brutal passions, terminates in a broad and rounded extremity of a fiery red colour, from which continually oozes a mucous humour. The cheeks, greatly swollen and deeply furrowed, are naked, and of a deep blue colour. A narrow blood-coloured ridge extends down the middle of the face, and terminates in the nose." Round the neck the hair is very long. On the sides of the head it joins that at the top, and the whole terminates in a somewhat pointed form. Each hair of the body is annulated with black and yellow; so that the whole fur has a greenish brown hue.

"When standing upright, the Mandrill is in height from three feet and a half to five feet. It is to be found on the Gold Coast, in several other parts of Africa, and also in the East Indies and the Indian Archipelago. Its voice bears some resemblance to the roaring of a lion. No art or kindness can in the least subdue its brutal propensities; and its great strength renders it an object of perpetual dread to its keepers. Yet it is not, strictly speaking, a carnivorous animal; for, though it will eat meat that has been cooked, its usual food is fruit and nuts."



THE URSINE BABOON.

"The Ursine Baboon of South Africa is known to naturalists from the descriptions of Sparrman, Vaillant, Burchell, and other scientifick travellers. It is an animal of very considerable strength, and attains, when full grown, the size of a very large Newfoundland dog. It resembles the dog in the shape of its head, and is covered with shaggy hair, of a brownish colour, except on the face and paws, which are bare and black. On level ground it always goes on all fours; but among the rocks and precipices, which are its natural refuge and habitation, it uses its hinder feet and *hands* somewhat as a human being would do, only with inconceivably greater boldness and agility, in clambering up the crags, or in springing from cliff to cliff.

"The ursine Baboon is not believed to be in any degree carnivorous, but subsists on wild fruits, and principally on the numerous variety of *uintjes* (edible roots and bulbs) which abound in the districts it inhabits. These roots it digs out of the earth with its paws, the nails of which, from this cause, are generally short, as if worn down by constant use; in other respects they nearly resemble those of the human hand.

"For defence against its enemies, such as the leopard, hyæna, wild-dog, &c., the ursine baboon is armed with formidable canine teeth about half an inch long, and, when driven to extremity, will defend itself successfully against the fiercest wolf-hound. It has a mode of grappling its antagonist by the throat with its fore-paws, or hands, while it tears open the jugular vein with its tusks. In this manner I have known a stout baboon despatch several dogs before he was overpowered; and I have been assured by the natives that even the leopard is sometimes defeated and worried to death by a troop of these animals. It is only collectively, however, and in large bands, that they can successfully oppose this powerful enemy. In many of the mountainous districts the leopard, it is said, subsists chiefly by preying upon baboons and monkeys; lying in wait and pouncing upon them suddenly, precisely as the domestick cat deals with rats.

"Though well armed for conflict, the ursine baboon, except in self-defence, appears to be a harmless and inoffensive animal. They are, it is true, occasionally troublesome to mankind, by robbing gardens, orchards, and corn-fields; but I never heard of any body being attacked by them, although I resided for some years in a spot where they are so numerous that the district takes its name from them, viz. Baviaans Rivier, or River of Baboons. There is, indeed, one remarkable story told at the Cape of a party of these animals carrying off an infant from the vicinity of Wynberg, a village about seven miles from Capetown, and, on the alarm being given by the distracted mother, retreating with it to the summit of the precipitous mountains 3000 feet in height, which overhang that pleasant village. My informants, persons of respectability, assured me that this incident had occurred within their own recollection; and that the child was recovered by a party of the inhabitants, after a long, anxious, and perilous pursuit, without having sustained any material injury. This singular abduction, the only instance of the kind I ever heard of, may after all have been prompted possibly by the erratick maternal feeling of some female baboon, bereaved of its own offspring, rather than by any ferocious or mischievous propensity.

"Be this as it may, the strong attachment of these creatures to their own young is an interesting trait of their character. I have frequently witnessed very affecting instances of their attachment, when a band of them happened to be discovered by some of the African colonists in their orchards or corn-fields. On such occasions, when hunted back to the mountains with dogs and guns, the females, if accidentally separated from their young ones, would often, reckless of their safety, return to search for them through the very midst of their fierce pursuers.

"On more peaceful occasions, also, I have very often contemplated them with great pleasure and interest. It is the practice of these animals to descend from their rocky fastnesses, in order to enjoy themselves on the banks of the mountain rivulets, and to feed on the nutricious bulbs which grow in the rich alluvial soil of the valleys. While thus occupied, they usually take care to be within reach of some steep crag or precipice, to which they may fly for refuge on the appearance of an enemy; and some of their number are always stationed as sentinels on large stones or other elevated situations, in order to give timely warning to the rest of the approach of danger. It has frequently been my lot, when riding through these secluded valleys, to come suddenly, on turning the corner of a rock, upon a troop of forty or fifty baboons thus quietly congregated. Instantly on my appearance a loud cry of alarm would be raised by the sentinels; and then the whole band would scamper off with the utmost precipitation. Off they would go, hobbling on all fours, after their awkward fashion, on level ground; then splashing through the stream, if they had it to cross; then scrambling with most marvellous agility up the rocky cliffs, often many hundred feet in height, and where certainly no other creature without wings could possibly follow them; the large males bringing up the rear guard, ready to turn with fury upon my hounds if they attempted to molest them; the females, with their young in their arms, or clinging to their backs. Thus, climbing and chattering, and squalling, they would ascend the perpendicular and perilous-looking crags, while I looked on and watched them, interested by the almost human affection which they evinced for their mates and their offspring; and sometimes not a little amused, also, by the angry vociferation with which the satyr-like leaders would scold me, when they had got fairly upon the rocks, and felt themselves secure from pursuit."

THE WANDEROO AND THE LOANDO.

"As these two animals seem to be but one and the same species, we have, therefore, here preserved the two names they bear in Ceylon, as they at least form two distinct breeds. The body of the Wanderoo is covered with brown and black hairs, and has a long white head of hair, and a monstrous white beard; the body of the Loando, on the contrary, is covered with whitish hairs, but he has the like large head of hair and beard. There is still a third variety found in the same country, which may possibly be the common stock of the other two, because it is of a uniform whitish colour over its body, with the like head of hair and beard. These animals are baboons, and not, as some have imagined monkeys, as they have all the characters, as well in shape as in disposition, and are of the same savage nature, and even more ferocious.

"'The white monkeys (says Forbin) are sometimes as big as the largest English mastiff; they are more dangerous than the black: they principally attack women, and often, after having greatly injured them, finish their cruelty by strangling. Sometimes they even come to their houses; but the Macaroes, who are very jealous of their wives, take care to prevent their entrance into their habitations; and the females not liking (as the chevalier humorously relates) either the manners or the figure of the paltry gallants, boldly stand on their defence, and with clubs, or whatever other arms they can provide, instead of answering their caresses, oblige their ugly suitors to return, not, however before they have damaged or plundered every thing they can lay their hands on.' It is, however, exceedingly doubtful whether the white monkey, here described, be of the same species as the Wanderoo."

THE MONA, VARIED, OR COMMON MONKEY.

"This is the most common of the Monkey tribe. We kept one of them, says Buffon, alive for many years. This alone is sufficient to prove that it is not a native of the hot countries of Africa and India. In fact, it is met with in Barbary, Arabia, Persia, &c. The visage of this animal is of a brown hue, with a kind of white beard, mixed with yellow and a little black; the back is red and black; the belly and the hind parts of the thighs and legs whitish, though the foreparts of the two last are of a black colour: the tail is of an ash-colour marked with two white spots, one on each side at its insertion. On its forehead the hair is of a gray colour, in the form of a crescent, and between the eyes and the ears is a black stripe, as there is from the ears, and shoulders, and arms.

"In general, the disposition of the Monkey is much more tractable than the baboon, and not so sullen as the ape: it is extravagantly spirited, but not ferocious, being docile through fear. The Mona is, in particular, susceptible of education, and even attached to those persons who take care of it. That which we brought up would suffer itself to be stroked and handled by those it knew, but would often bite strangers. It was chained, but was very desirous of its liberty; for, when it either broke its chain or got loose, it would run away, and would not suffer itself to be retaken by any other person than its master. It ate every thing that was offered to it, especially flesh, bread, and its favourite food, fruits. The Mona is about a foot and a half in length."

We have thus given a concise description of ten of the different species of the monkey tribe. They, however, as we stated in the outset, are extremely numerous; and we could not give even a short description of all the different species without incurring the charge of being tedious. If we stop here, we should be liable again to the charge of being desultory in our selections and superficial in our knowledge. To avoid both we will give a succinct account or catalogue of all the different species within our acquaintance, which belong to other portions of the earth than our own continent, reserving the description of those which belong peculiarly to our own hemisphere for a future page.

The Pithecos, or Pigmy Apes, are common in Asia, as well as in Libya and other provinces in Africa. They live upon herbs and fruits, and the plunder of gardens; they are very mischievous, and when chased, retreat with great agility, the females carrying their young upon their backs. They are fattened for food, by the inhabitants of the countries where they are found, who take them by intoxicating them with strong liquors, of which these apes are very fond.

The Pig-tailed Baboon, so called from its naked pig-like tail, is the least of all the baboon kind. It is a native of Sumatra and Japan.

The Pig-Faced Baboon, is a native of Africa, and was formerly exceedingly troublesome to the settlers in the neighbourhood of the Cape of Good Hope. Its voice resembles the bark of a dog.

The Bonneted Monkey, inhabits Eastern Asia. It is so called, because its hair on the upper part of the head diverges horizontally from a central point towards an imaginary circumference; thus looking not unlike the round bonnet of a Chinese. Buffon calls it the Chinese Bonnet.

The Dog-Faced Baboon, resembles the Ursine Baboon, and inhabits various parts of Africa and Asia. It lives in troops, commits great depredations in gardens and cultivated grounds, and is exceedingly strong, vicious, and impudent.

The Macaque and the Egret, are natives of Congo, and other southern parts of Africa. They have long tails, but in other respects very nearly resemble the Baboon. The Egret differs from the Macaque only in having a plume upon his head. This species is numerous, and various.

The Patas, is a native of the same country; its hair is a brilliant red. In Senegal, it is called the Red Monkey. They have a great curiosity, and frequently climb to the tops of trees, to admire vessels off their coast at sea; when attacked they throw stones.

The Malbrouck, is found in Bengal. Its body is but about a foot and a half long; but it is very mischievous, plundering fields of grain, and sugar cane, sometimes taking the tiles off the roofs of houses, destroying birds' nests, &c.

The Mangabey, lives in Madagascar, and the western coast of Africa. They have white eye-lids; and some of them white beards, and white rings round their necks.

The Callatrix, or Green Monkey, is found in Senegal, as well as in Mauritania and the neighbouring islands. "I only discovered these animals," says Mr. Adamson "by their breaking off branches of trees, and throwing them down on my head; for they were so very quiet and nimble in their tricks, that I could scarcely hear them."

The Mustache, is a native of Guinea and Congo, and is said to be the most beautiful of the monkey kind. It has a white nose, and blue face; and an edging of black hair on the upper and under lip. There are two tufts of hair of a bright yellow colour below the ears, and another tuft of bristly hair on the head; the hair of the body is of a greenish cast, and the breast and belly of an ash colour.

The Talapoin and the black monkey, are probably varieties of the same species. They inhabit the eastern provinces of Asia; the skin of the black monkey makes a good fur.

The Douc is the last among the apes, baboons, and monkeys. Without belonging to any of the three precisely, yet it partakes of them all. It has the tail of the monkey, the size of the baboon, and the flat face of the ape. The Douc is the only monkey which has no callosities on its posteriors, and is covered all over with hair. "Its face is covered with reddish down with a white beard; the ears are naked, and of the same colour as the face; the lips brown, as are the orbits of the eyes: the colour of the hair is very bright, and very variegated; it has a collar of a purple colour round its neck; its forehead, body, and arms, are white; its hind legs are of a red chestnut; it is black above the forehead and the upper part of the arms; the parts below the body are of an ash colour; the tail is white as well as the bottom of the loins; it more frequently walks on two feet than on four; and it is three feet and a half or four feet high when it is upright."

It is stated by travellers, that the larger monkeys of the southern portions of Asia produce bezoar* in their stomach, which is superior to that of the bezoar of goats and gazelles.

We have thus, with the Oran-otang and the long armed Ape, enumerated twenty-four species of those animals comprised among apes, baboons and monkeys, of the order quadrumana. We trust our readers will have found gratification, if not in the history of these animals, at least in having learned the *distinctive characteristicks* of the ape, the baboon and the monkey.

PITCAIRN'S ISLAND, AND THE MUTINEERS OF THE BOUNTY.—Continued.

Pitcairn's Island is about six miles long by three broad; the soil is very rich, and it is mostly covered with wood. It lies under the parallel of 25° of South latitude, and in the midst of the wide expanse of the Pacific Ocean. The climate is fine, and adapted for the growth of all the vegetable productions of every part of the globe. The coast is fringed with formidable barriers, which seem to present insurmountable obstacles to all access; tall spiral rocks appear on every side: and lofty cliffs, skirted at their bases with thickly branching ever-greens, afford a welcome retreat and shelter from the burning rays of an almost vertical sun. Groves of Palm-trees, Cocoa-nut trees, the Tea-tree, and other tropical productions cover the valleys and the slopes towards the centre of the island, which is occupied by a mountain, the ridge of which rises 1109 feet above the sea. The ridge itself is a narrow ledge, running from one pinnacle to another, and is in some parts not more than three feet wide, with fearful precipices on each side. At the northern extremity of this ridge, is a cave of some interest, as being the intended retreat of Christian and his companions, in the event of a landing being effected in pursuit of them; and here he always kept a store of provisions, against any emergency that might occur. On all points the island is terminated by cliffs or rocky projections, detached from which lie scattered numerous fragments of rocks, rising like so many black pinnacles amid the surf, which on all sides rolls in upon the shore.

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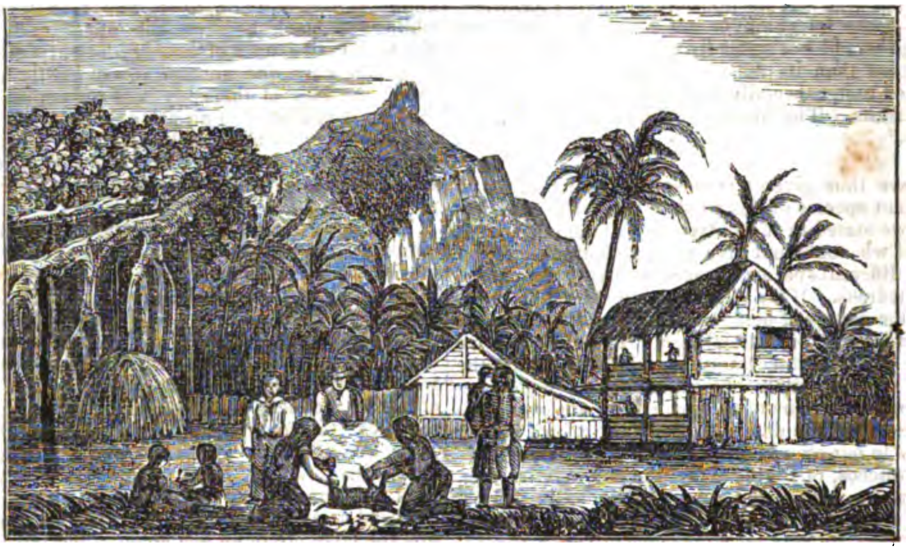
* Bezoar is a word of Persian derivation signifying a destroyer of poison. Ox-bezoar is a hard ball of hair.

The path down the ravine, leading from the mountain-ridge, is precipitous in the extreme, and dangerous to all but the natives, who, young and old, unconcernedly trudge up and down its formidable sides. The "Rope Cliff," so called because it can only be descended by the aid of a rope, is on the east side of the island. It overlooks a small sandy bay, lined with rocks which render it dangerous for a boat to attempt to land; at the foot of the Rope Cliff, some axes and a hone were found, the manufacture of the former natives. On the left of it, is a peak of considerable beauty, overlooking what is called Bounty Bay on account of the Bounty having been burned there. Upon this peak the mutineers found four images, about six feet high on a platform, similar, to the *maraes* at Easter Island.



VILLAGE IN PITCAIRN'S ISLAND.

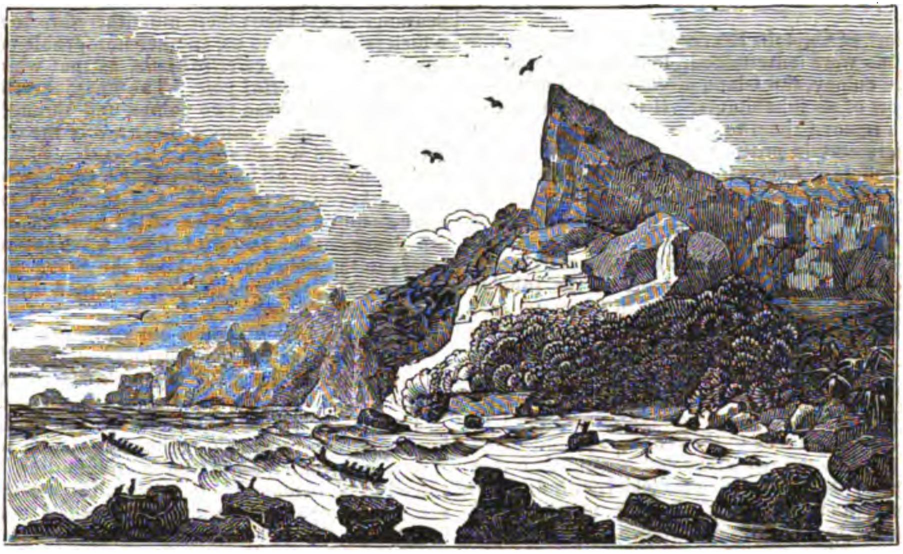
The natural vegetable productions of this Island are numerous, as the Cocoa-nut, Banana, Bread fruit, Plantain, Water-Melon, Pumpkins, Potatoes, Pease, Sugar-cane, Ginger, Turmerick, Tobacco, the Tea-plant, and various other tropical trees and plants. Of quadrupeds they have only those which were introduced by the mutineers.

At the period of Captain Beechey's visit, the colony consisted of sixty-six persons, of whom only six, namely, Adams, and five Otaheteian women, were original settlers; the remainder being the children of the mutineers, or of the black men who accompanied them. These interesting islanders are tall, robust, and healthy; the average height of the men is five feet ten inches, their limbs are well proportioned, round, and straight; and simple diet, and early habits of exercise, have given them great muscular power. The perfect simplicity and good-nature depicted upon their countenances, and the cheerfulness, and vivacity that prevail throughout the colony, render them highly interesting to visiters. Captain Beechey was delighted with their manners, and spent some time amongst them, receiving the greatest attention and hospitality from them. Adams was looked up to as a patriarch, and nothing affected their minds so much as the fear of losing him.

The females are rather above the size of Europeans, and their limbs, from their being accustomed to work, and to climb the hills, are unusualy muscular, but their features and manners are perfectly feminine. Their complexion, though fairer than that of the men, is of a dark gipsy hue; their dark glossy hair, nicely oiled, hangs down over the shoulders in long waving tresses, and is tastefully turned back from the forehead and temples, and secured by a chaplet of small red or white aromatick flowers, newly gathered from the Flower-tree, (*Morinda citrifolia,*) or the blossoms of the Tobacco-plant. Their countenances are cheerful, their eyes dark and animated, and their teeth white and even. Their affection for Adams was displayed in a very striking manner, upon Captain Beechey's first visit. It being ascertained that the ship was a British man-of-war, fears were entertained, that it came for the purpose of conveying him a prisoner to England. The whole colony were in a consternation, and the females in tears; but as soon as his perfect safety was assured to them, the affectionate manner in which his daughter Hannah Young, and, indeed, all the young females, embraced and congratulated him, was extremely moving. They welcomed the officers with great cordiality, and conducted them to the village, which consisted of five houses, built upon a clear piece of ground sloping on one side to the sea, and on every other side bounded by lofty crags, or groves of Palms, or Cocoa-nut and other tropical trees.

The houses are substantially built, and consist of two floors, both boarded; as are also the sides, in sliding pannels. The upper floor is the bed-room, around which the beds are arranged in the neatest order. These consist of a fixed bedstead, raised about eighteen inches, and boarded; upon these is laid a mattress, covered with native cloth; and the sheets are of the same material. In the lower room stands a large table, with seats round it. The floor is raised about a foot from the ground, and boarded: it communicates with the upper by a ladder, placed at a trap-door in the centre of the ceiling. At the back of the houses are the places for fattening pigs, fowls, and goats; and beyond are the cultivated grounds, producing the Yam, Banana, Plantain, Water-Melon, Potato, and various other roots and fruits, upon which the natives chiefly subsist.

The occupations of these people do not present much variety, but their strict attention to the duties of Religion, and their uniform regard to the precepts of the Gospel, are very remarkable, and put to shame those, who, residing in more civilized countries, possess much greater advantages. They rise with the sun, and offer up a prayer before leaving the room. They have morning and evening prayer together, and on going to rest, never fail to commit themselves to the care of the Divine Being. The Sabbath is invariably a day of rest to them from the ordinary labours of life. They have built themselves a place of worship, where they have three services on that day. A seaman, named John Buffet, was so struck with the simplicity of their lives that he took up his residence amongst them, and, at the time of Captain Beechey's visit, officiated as clergyman. That officer attended the various services, and was delighted with the simple piety and fervent devotion manifested by both young and old, throughout the little congregation. The church services were always read, partly by Buffet, and partly by Adams; but the former delivered the sermon. He acted, also, as school-master to the colony, and found among the children willing and attentive scholars. We are sorry, however, to be obliged to add, that the subsequent conduct of this man has been far from correct, and has proved him to be unfit for the office he had assumed.



BOUNTY BAY, PITCAIRN'S ISLAND.

Adams, who had attained his sixty-fifth year, was unusually strong and active for his age. He still retained his sailor's habits, doffing his hat, and smoothing down his forehead with his hand, when addressed by the officers. To the surprise of Captain Beechey, he expressed a desire to go to England, although aware of the fatal consequences that might result from such a step; but the universal grief and lamentation of the whole colony, at the prospect of losing him, induced him to give up all idea of leaving them, and he continued with them until his death, which took place in March, 1829. During his life, he was looked up to as the father of the whole family; and when on his death bed, he expressed a wish that they would choose a chief to succeed him, but it does not appear that they have yet done so since his decease.

These islanders eat but very little animal food: they have hogs and goats, but the flesh and the milk of the latter are not much relished by them. The hog is invariably baked in an oven made in the ground, as is practised in Otaheite. Fowls, also, are fattened in considerable numbers; but the yam and the cocoa-nut, dressed in different ways, constitute their chief subsistence.

Their bill of mortality for thirty-five years must be an object of speculative curiosity to the political economist. It appears that up to Captain Beechey's visit, in 1825 the population consisted of nine Englishmen and six male, and twelve female Otaheiteans, the survivors of the original party, together with sixty-two children born on the island. Seven English and six Otaheitean men had been murdered; one Englishman, four women, and two children, had died a natural death; and two women had been killed by falls from the Cliff. They have no medicine, except salt-water, ginger-tea, and *abstinence*, according to the nature of their simple complaints. Their principal disorder is a tendency to plethora, but in most cases the patient is relieved by bleeding at the nose.

They live together in perfect harmony and contentment, and are virtuous, religious, cheerful, and hospitable. No serious differences have occurred to mar their social comfort; and their disputes, to use their own language, are only "quarrels of the mouth." They studiously avoid those amusements which are likely to lead to dissipation or immorality, and their manners in this respect are a perfect contrast to those of the native women in the Polynesian groups. Adams assured Captain Beechey that not a single instance of immoral conduct had occurred among the females, since the death of Quintal; and both sexes are remarkable for the strictness with which they adhere to their word. A striking instance of this occurred, in the case of Polly Young and George Adams. The latter had, when quite a youth, conceived an attachment for Polly. but she declared to her companions that she "never would marry George Adams." They grew up however, and it appears that no suitable partner for

The inequality of days and seasons, arises from the different positions which the earth assumes in reference to the sun. The surface of the earth is at every instant divided into two parts, the one illuminated by the sun, and the other deprived of his light. The whole surface which the earth presents to the sun, is embraced in what is termed the *circle of illumination.* All the circles, but the great circles, are divided into unequal parts by the circle of illumination, according as the sun's apparent position is in the northern or southern hemispheres. This inequality becomes more sensible according as the circles are farther removed from the equator. In this case the greater of the two portions lies upon the illuminated side of the earth; and it is only the smaller portion which lies upon the dark side: for all these points, therefore, the length of the day must exceed that of the night. When one hemisphere is illuminated by the sun, the length of days must diminish as we approach the pole in the opposite hemisphere; and the polar region, which lies entirely upon the dark side of the earth, is buried in night, until the sun appears in that hemisphere.

When the solar rays are directed towards the centre of the earth, in a line perpendicular to the axis, then the equator, as well as all the circles parallel to it, are divided into equal parts by the circle of illumination: but since the extent of the enlightened part of the earth is equal to that of the dark part, the length of the day must therefore be equal to that of the night, for every point of the surface of the earth. The seasons at which the centre of the earth is in these two positions have been denominated the *equinoxes;* and as the sun is then in the plane of the equator, that circle has thus received the name of the *equinoctial line*, or simply the *line*.

When the sun has attained its greatest apparent altitude in one hemisphere, it is summer in that hemisphere and winter in the opposite hemisphere. When its apparent position is about half way between the summer solstice and the equator, it is autumn in that hemisphere and spring in the other, and *vice versa.*

The limits, which the sun appears to attain in the northern or southern hemispheres, and there stops and retraces his steps, have received the name of *solstices.* They are likewise called *Tropicks*—that is, *circles of return.* That which is at the north is called the *Tropick of Cancer:* the other the *Tropick of Capricorn.* These denominations seem to have been given by a people situated north of the equator, who seeing the sun return toward the south, after it had passed the northern tropick, gave to this parallel the sign Cancer, or the crab, an animal which frequently moves backward. On the contrary, the sun appearing to them to ascend from the southern tropick, and mount again to the equator, they gave to this parallel the sign of Capricornus, or the goat, this animal being fitted for climbing. These two parallels, solstices, or tropicks are situated at equal distances from the equator, viz: about 23° 27′ 54″.

The circles which circumscribe towards each pole the part of the earth's surface deprived of the solar rays when the sun is in the opposite hemisphere, are denominated polar circles; the one is called the *arctick*, and the other the *antarctick* polar circle.

The surface of the earth is thus divided into five *zones*, or *belts*, by the polar circles and the tropics: those which are enclosed by the polar circles, being deprived of the heat of the sun for a great part of the year, and during the other part, receiving its rays but very obliquely, have deservedly received the name of *frigid* or *frozen zones.* Two other zones, one in each hemisphere comprehended between the polar circles and the tropick, receive the sun's rays less obliquely than the frozen zones, but never vertically; these are the *temperate zones.* Lastly, the zone comprehended between the two tropicks, each point of which passes twice under the sun in the year, and which receives constantly the solar rays, in a direction very little oblique, has obtained the name of the *torrid zone.* We shall elsewhere recur to the physical qualities of these great regions of the globe.

MANNA OF MOUNT SINAI.

In our article on history in the present number, we speak of the manna upon which the Israelites subsisted in the wilderness, as a kind of substantial *dew.* So it is called by nearly all the historians, not even excepting Moses himself in Exodus c. 16, v. 14: and in verse 31, he says "it was like coriander seed, white; and the taste of it was like wafers made with honey." But some late foreign journals state, that Mr. Bove, formerly director of the gardens and farms of Ibrahim Pacha, at Cairo, gives an account in his report made to the Academy of Sciences, of the different productions of Egypt. In 1832, he found the *tamarix manniferis* (the turfah of the Arabs of the desert,) growing in great abundance in the desert, about a day's journey to the northward of Sinai. He saw women and children engaged in gathering the manna, which was running from the branches of this shrub. The Arabs assured him that when this manna was purified, it was equal to the finest honey. What he gathered himself was in large drops, of the size of a pea, of a pale yellow colour, rather agreeable taste, or slightly sweet and gummy. In order to purify it, the Arabs put it into boiling water, it rises to the surface, and is immediately skimmed off. This they think, is probably the manna which nourished the Hebrews. Some authors pretended that the manna of the Hebrews was the production of *alhage maurorum*, a shrub which is never found but on the borders of the desert, where there is a good deal of moisture, but there were none of these near to Sinai.

POETRY.

THE SHIP.

HER mighty sails the breezes swell,
  And fast she leaves the lessening land
And from the shore the last farewell
  Is waved by many a snowy hand;
And weeping eyes are on the main,
  Until its verge she wanders o'er;
But, from that hour of parting pain,
  Oh! she was never heard of more!

In her was many a mother's joy,
  And love of many a weeping fair;
For her was wafted, in its sigh,
  The lonely heart's unceasing prayer;
And oh! the thousand hopes untold
  Of ardent youth, that vessel bore;
Say, were they quenched in ocean cold,
  For she was never heard of more?

When on her wide and trackless path
  Of desolation, doomed to flee,
Say, sank she 'mid the blending wrath
  Of racking cloud and rolling sea?
Or, where the land but mocks the eye,
  Went drifting on a fatal shore?
Vain guesses all!—Her destiny
  Is dark:—she ne'er was heard of more.

The moon had twelve times changed her form,
  From glowing orb to crescent wan;
Mid skies of calm, and scowl of storm,
  Since from her port that ship had gone;
But ocean keeps its secret well;
  And though we know that all is o'er
No eye hath seen—no tongue can tell
  Her fate:—she ne'er was heard of more!

Oh! were her tale of sorrow known,
  'Twere something to the broken heart,
The pangs of doubt would then be gone,
  And fancy's endless dreams depart!
It may not be:—there is no ray
  By which her doom we may explore;
We only know she sailed away,
  And ne'er was seen or heard of more.

Edinburgh Mag.

AERONAUTICKS.—Continued.

On the level of the sea the barometer stood at 30.25 inches, and at the place of departure it stood at 30.12. Three minutes after its ascending, the balloon was lost in the clouds, and the aerial voyagers lost sight of the earth, being involved in a dense vapour. Here an unusual agitation of the air, somewhat like a whirlwind, in a moment turned the machine three times from the right to the left. The violent shocks which they suffered, prevented their using any of the means prepared for the direction of the balloon, and they even tore away the silk stuff of which the helm was made. Never, said they, had a more dreadful scene presented itself to any eye, than that in which they were involved. An unbounded ocean of shapeless clouds rolled one upon another beneath, and seemed to forbid their return to the earth, which was still invisible. The agitation of the balloon became greater every moment. They cut the cords which held the interiour balloon, which consequently fell on the bottom of the external one, just upon the aperture of the tube, which went down into the boat, and stopped it up. At this time the thermometer showed a little above 44 degrees. A gust of wind from below drove the balloon upwards, to the extremity of the vapour, when the appearance of the sun showed them the existence of nature; but now both the heat of the sun, and the diminished density of the atmosphere, occasioned such a dilatation of the inflammable air that the bursting of the balloon was apprehended; to avoid which they introduced a stick through the tube that proceeded from the balloon, and endeavoured to remove from its aperture the inner balloon, which closed it; but the dilatation of the inflammable air pushed the inner balloon so violently against the aperture of the tube, that every endeavour proved ineffectual. During this time, they still continued to ascend, until the mercury in the barometer stood not higher than 24.36 inches, which shows their height above the surface of the earth to be about 5,100 feet. In these dreadful circumstances, they thought it necessary to make a hole in the balloon, in order to give an exit to the inflammable air; and the Duke of Chartres, by means of one of the banners, made two incisions which caused a rent of about seven or eight feet. They then descended very rapidly, seeing at first no object on earth or in the heavens; but a moment after they discovered the fields, and were descending straight towards a lake, into which they must have fallen, had they not thrown overboard about sixty pounds weight of ballast, which occasioned their coming down at about thirty feet beyond the edge of the lake. Notwithstanding this rapid descent, occasioned by the great quantity of gas which escaped out of the two rents in the balloon, none of the four adventurers was hurt; but spoke in the highest terms of excitement of the pleasures of their expedition.

These successful aerial voyages were soon followed by others. Blanchard had already ascended several times, when he determined to cross the channel between England and France, which is about 23 miles wide, in a balloon filled with inflammable air. He succeeded in this bold attempt, Jan. 7, 1785, accompanied by an American gentleman, Dr. Jeffries. About one o'clock they left the English coast, and at half-past two, were on the French. Pilatre de Rozier, mentioned before as the first aeronaut, attempted, June 14, 1785, in company with Mr. Romain, to pass from the French to the English side; but the attempt was unsuccessful, and the adventurers lost their lives. M. de Rozier had on this occasion united the two kinds of balloons; under one, filled with inflammable air, which did not alone possess sufficient elevating power, was a second, filled by means of a coal fire under it. Rozier had chosen this combination, hoping to unite the advantages of both kinds. By means of the lower balloon, he intended to rise and sink at pleasure, which is not possible with inflammable air; for a balloon filled with this, when once sunk to the earth, cannot rise again with the same weight, without being filled anew; while, on the contrary, by increasing or diminishing the fire under a balloon filled with heated air, it can be made to rise and fall alternately.—But this experiment caused the death of the projectors. Probably the coals, which were only in a glowing state near the surface of the ground, were suddenly kindled to a light flame as the balloon rose, and set it on fire. The whole machine was soon in flames, and the two aeronauts were precipitated from the air. The condition of their mangled bodies confirms the conjecture that they were killed by the explosion of the gas. This unhappy accident did not deter others; on the contrary the experiments were by degrees repeated in other countries.

However important this invention may be, it has as yet led to no considerable results. Its use has hitherto been confined to observations in the upper regions of the atmosphere. But should we ever learn to guide the balloon at will, it might, perhaps, be employed for purposes of which we now have hardly an idea; possibly the plan of professor Robison might be accomplished by the construction of a gigantick balloon, which would enable us to perform an aerial circumnavigation to the earth. During the French revolution, an aerostatick institution was founded at Meudon, not far from Paris, for the education of a corps of aeronauts, with the view of introducing balloons into armies as a means of reconnoitring the enemy. But this use of balloons was soon laid aside, for like every other, it must be attended with great uncertainty, as long as the machine has to obey the wind. Among the French, Blanchard and Garnerin have undertaken the greatest number of aerial voyages; among the Germans, professor Jungius, in Berlin, in 1805 and 1806, made the first. Since that time, professor Reichard and his wife have become known by their aerial excursions. Even in Constantinople, such a voyage was performed, at the wish and expense of the sultan, by two Englishmen, Barly and Devigne. Blanchard has rendered an essential service to aeronauts by the invention of the parachute, which they can use, in case of necessity, to let themselves down without danger.

The arrangement of the parachute, with reference to its use for aeronautick purposes, may now be more fully illustrated.

A cylindrical box, about three feet in height, and two in diameter, was attached by a straight pole to a truck or disc at the top, and from this was suspended a large sheet of linen somewhat similar to an umbrella. When first cut from the balloon, it descended with amazing velocity, and those who witnessed its progress considered the destruction of the aeronaut as certain; but after a few seconds the canvass opened, and the resistance was so great, that the apparatus diminished in its speed, till on its arrival near the earth it was not greater than would have resulted from leaping at a height of two feet.

Amongst the unfortunate aeronauts we may place Major Money, who ascended from Norwich, under the full impression that the aerial current would take the balloon in the direction of Ipswich. Scarcely, however, had he attained an altitude of one mile, when a violent hurricane, operating in a new direction, drove the balloon towards Yarmouth. Several small row-boats immediately put out from that port, and endeavoured to keep pace with the balloon, but without success, and Major Money first touched the sea about nine miles from land and more than three from any means of assistance.

And it was only by the assistance of a fast sailing cutter, which happened to lay in the track of the balloon, that he was saved, when almost exhausted.

The utility of aeronautick studies and experiments has been very much questioned even by philosophical minds. M. Cavallo, well known in the philosophical world, suggested long ago that small balloons, especially those made of paper, and raised by means of spirits of wine, may serve to explore the direction of the winds in the upper regions of the atmosphere, particularly when there is a calm below; and we see the French aeronauts adopted this idea, that they might serve also for signals in various circumstances, in which no other means can be used; and letters or other small things may be easily sent by them; for instance, from ships that cannot safely land on account of storms; from besieged places, islands, or the like. The larger aerostatick machine, he adds, may answer all the above-mentioned purposes in a better manner; and they may, besides, be used as a help to a person who wants to ascend a mountain or a precipice, or to cross a river; and perhaps one of the machines tied to a boat by a long rope, may be, in some cases, a better sort of sail than any that is used at present. Their conveying people from place to place with great swiftness, and without trouble, may be of essential use, even if the art of guiding them in a direction different from that of the wind should never be discovered. By means of those machines the shape of certain seas and lands may be better ascertained; men may ascend to the top of mountains they had never visited before; they may be carried over marshy and dangerous grounds; they may by that means come out of a besieged place, or an island; they may, in hot climates, ascend to a cold region of the atmosphere, either to refresh themselves, or to observe the ice which is never seen below; and in short, they may be thus taken to several places, to which human art hitherto knew of no conveyance.—*Brit. Cyc.*

We may add, that our own countrymen, have for the last few years been entertained with a multitude of areonautick experiments, the entire success of which evinces the perfection of modern balloons. And it seems now certain, that could some method of guiding them in different directions, or of propelling them against the wind, be devised, the happy aeronaut might claim companionship with the birds of the air, and the whole human race would be benefited, in the thousand uses to which such a mode of quick transition might be applied. In the present state of the science, of course, the velocity with which balloons may pass through the air, is dependent upon the velocity and strength of the wind. The greatest velocity yet attained by any areonaut, is, we believe, that of M. Garnerin at London, in 1802, and at Paris in 1807. In the former case, his velocity was about 6402 feet the minute, or about 70 miles an hour, a rate that would have carried him round the world in a fortnight! In the latter he attained 80 miles an hour! Mr. Mills at a recent ascension at Baltimore, was driven across the Chesapeake Bay, a distance of 14 miles, in seventeen minutes which is about 42 miles an hour. On the 1st instant he ascended again from Lancaster, Penn. and was driven to New Castle on the Delaware river and thence to Elkton, Md.; a distance of about 100 miles in two hours and six minutes, or about 50 miles an hour.

Among other results of the many experiments tried in this country, Mr. Robertson, ascending recently from Castle Garden, experienced at a great height quite violent sensations from the noise of cannon-firing upon the earth. The vibrations produced upon the atmosphere by the sound were so powerful as to endanger his balloon, and he found the vibrations the more violent and extensive as he advanced upwards.

The most beautiful ascension that has yet taken place in this country, probably, was that of Mr. Durant at Boston in September last. On rising from the common his balloon took an inclination westward, and was borne upwards in that direction till he attained an altitude of 8000 feet, over Cambridge, when it struck a counter current of air that bore him calmly and smoothly back directly over the Common whence he arose, several miles out to sea. Mr. Durant then lowered himself into the current bearing west, and was brought back over the Common again, and sailed majestically away inland about 16 miles, when he alighted in safety. We were witnesses of this beautiful spectacle; and taking into view the splendour of the day, and the enthusiasm of the thousands of assembled beholders, we are constrained to acknowledge it one of the most triumphant exhibitions of the art we ever beheld.

Balloons are constructed of oiled or varnished silk, and covered with a netting of twine, which also sustains the car in which the aeronaut sits. They are filled with hydrogen gas, which when pure is about 14 times lighter than atmospherick air. As it is commonly used, however, it is said to be but six or seven times lighter than air. Hydrogen gas is obtained by mixing four parts of water with one of sulphurick acid, into which is thrown a quantity of iron filings. The gas is conducted into the balloon by means of tubes, provided for the purpose. It having no affinity for common air, it forces it out at the bottom of the balloon, which is always kept open. Purer and lighter gas is said to be obtained from zinc than iron. As the gas would naturally expand even to the bursting of the balloon as it ascends, were it not for the aperture at the bottom, so the aeronaut could never descend, without the valve at top by which he permits a portion of the gas to escape. It is closed by a spring, and a cord is attached to it which passes through the centre of the balloon to the hand of the aeronaut.

Were we assured of the safety of the aerial car, with what immeasurable delight might we sail over mountains and valleys, oceans and rivers, with nothing but the clouds around us, and the wide earth in its beautiful variety beneath us, and speedily and quietly accomplish those transitions that now cost us the toil of months, the weariness of many days, and the comfortlessness of many painful nights. The full enjoyment of such an aerial luxury, will undoubtedly ere long, be the result of the experiments which the enterprise of the age will not fail to undertake.—[Ed.]

EARTHQUAKES AND VOLCANOES.

Earthquakes and volcanoes present us with all the varieties of *igneous* causes which effect such mighty changes in the structure of our planet; and those two classes of physical causes have apparently ever been actively employed in the same regions together. Signs of disturbance, well known to geologists, are now to be seen, where the earth has long been in a state of repose; and it is interesting, as well as useful, to trace those vestiges of devastation and reconstruction which anciently arose from the union of two such powerful agents as fire and water. It is not difficult to account for the determination of the one series of causes, but it is less easy to give any satisfactory explanation of the limits by which the other is bounded and its force spent. In other words, it requires much close investigation to determine precisely under what circumstances it ever happens that a volcanick cause becomes extinct.

The phenomena of earthquakes and volcanoes although very distinct, proceed alike from subterranean movements; and those of the former are the least violent when connected with the latter. Volcanoes, indeed, may be regarded as the safety valves of the globe, permitting the expansions of heated fluids to escape by means of natural vents, which might otherwise become more extensive and destructive than the most active volcano, however measured and limited are the forces of either class of phenomena.

According to general observation, the volcanick vents are seen to take a linear direction, as if the forces acting upon them obeyed some determinate law of action; and when the intermediate spots are examined, it is clearly shown that the interiour force below has operated continuously and uninterruptedly; as is exhibited in tracing the entire line of several mountain ranges of volcanick countries, such as the Andes, &c. From the forty-sixth degree of south latitude to the twenty-seventh north, upwards of twenty-three active vents have been counted, forming an uninterrupted volcanick chain.

A question has arisen as to the period of extinction among volcanoes; but it does not appear that a long state of inactivity warrants the conclusion that the vent will never be re-opened. Seventeen centuries elapsed between two eruptions in Ischia, and the passive state of Vesuvius was much longer. Among the Chilian craters, shocks and earthquakes are felt every year; and the levels of land are raised upwards of twenty-one feet, in many instances, above their former level. Peru is perpetually disturbed with earthquakes; and flames of fire, with burning cinders, issue from different points in a northerly direction; and the whole chain is one volcanick region of several thousand miles extent, from Chili to the north of Mexico, including the West India islands. If we look towards the east, we find a grander chain of volcanoes even than this, from Russian America to the Moluccas. The greatest northern extent of igneous action appears to be at fifty-five degrees. But the Pacific Ocean itself is sufficient to furnish us with the most abundant examples of the activity of the agent in question, every island of which, perhaps, exhibits traces of volcanick action.

When we look to the old world, from east to west, one thousand miles, from the Caspian Sea to the Azores, including the greater part of the Mediterranean, the Austrian, Tyrolean, and Swiss Alps, &c., the Cevennes, and the Pyrenees to the north of the Tagus, we have an uninterrupted line of volcanick disturbances, the southern boundaries of which include the most northern parts of Africa and a portion of the desert of Arabia. The Lisbon earthquakes have always been celebrated for their violence, the shocks of which have been felt westward at sea to the distance of from one hundred and twenty to two hundred and sixty-two French leagues. And, in tracing the line of direction in which these igneous forces act, it is curious to observe that a continuity of effect exists from the Grecian Archipelago, through the volcanick regions of southern Italy, Sicily, the south of Spain and Portugal, along the ocean to the volcanick group of the Azores. In the south of Europe, we find a central tract of country devoted to the most frequent and active earthquakes, the prolongations of which are merely vibrations from the great central forces in operation.

Geological examinations of the crust of the earth show that ancient and modern igneous forces run in different directions; so that the former are often observed to intersect the latter, each being marked by a determinate line of direction. The ancients have handed down very imperfect accounts of these disturbances, and little of value, indeed, is to be found beyond what is connected with the shores of the Mediterranean; all else is buried in obscurity. Their narratives generally relate to the destruction of human life and property, but do not go into those scientifick details with which we are chiefly concerned. With the exception of one ejection of lava, Ischia has remained tranquil ever since the destruction of the Syracusan colony; but it bears about its central elevations strong evidences of former disturbance, such as a greenish indurated tuffa of great thickness, with argillaceous marl and veins of indurated lava, raised 2605 feet above the level of the ocean. The entire composition of this hill is evidently of subaqueous origin, and has been lifted up at different periods. It contains twelve large volcanick cones, which appear to have acted as so many safety valves to the surrounding country during a long period of repose which Vesuvius enjoyed. These craters, and others, from the earliest records of the Christian era, were evidently central vents of subterranean and subaqueous disturbances. At the period of the Christian era, geologists consider the most interesting events commenced. Vesuvius then indicated no vestige of a crater, while its structure exhibited some analogies to other volcanick mountains. Its ancient cone is described as being regularly formed, and not, as now, consisting of two distinct peaks: the summit of the cone was flat, and it was surrounded with fertilization. The towns of Herculaneum and Pompeii were built at its base, destined to subsequent destruction. Sixty-three years after the appearance of Christ, Vesuvius first showed signs of returning activity; and after repeated shocks, in August 79 an eruption occurred, during which the elder Pliny lost his life, overwhelmed by sulphureous vapours. It appears, however, from his nephew's narrative, that there was no flow of lava. Lapilli, sand, and fragments of old lava, were thrown up, according with other eruptions, all of which seem to have been nearly similar. In the year 1036, the first appearance of fluid lava occurred; and after 1139, the mountain remained quiet one hundred and sixty-eight years, two small vents opening in the mean time, with occasional slight shocks. During the repose of Vesuvius, Etna was in a state of activity; and a new mountain suddenly shot up in 1538, on the 29th September, two hours after sunset, accompanied by an alarming discharge of pumice, unmelted lava, and ashes mixed with water and fire, portions of which fell in Naples, and scared the populace from Puzzuoli, whilst two hundred yards of seacoast became dry. This eruption ceased October the 3d following, leaving a funnel-shaped crater on the summit of the mountain. Such was the formation of Monte Nuovo, by the side of which Monte Barbaro, Astroni and Solfatara, were all successively formed, constituting so many volcanoes of the Phlegræan fields, some centuries intervening between each eruption. A century after the production of Monte Nuovo, Vesuvius remained passive; and from 1666 to the present time it has been subject to periodical eruptions. From 1800 to 1822, the cone of Vesuvius was gradually filled up with scoriæ and masses of burning lava from below. In October 1822, an eruption changed it into an immense gulf of an irregular elliptical form, three miles in circumference and less than half a mile in diameter. Constant dilapidations are going on at its sides, making its recent depth one instead of two thousand feet, as formerly; and from frequent explosions, the height of the mountain has been reduced from four thousand two hundred feet to three thousand four hundred.

The mineral contents of modern Vesuvius are augite or pyroxene, felspar, leucite, mica, olivine, sulphur, &c. And an immense variety of mineral substances are found around the mountain, together with volcanick alluvions, formed at considerable distances, containing sand, scoriæ, tuffa, pumice, lapilli, &c.

Since the erection of Pompeii no stream of lava ever reached that city, its destruction having been effected by showers of lighter alluvial matter. Herculaneum was discovered, very differently situated, in digging a well, in the year 1713, when they came down at once upon the theatre in which the statues of Hercules and Cleopatra were found, both cities having originated with Grecian colonists, and long continued the most flourishing of Campania. Pompeii was found to measure three miles in circumference, but that of Herculaneum is uncertain; and this city appears to have been the only one destroyed by melted lava.

The highest point of Etna, near the sea, is 11,000 feet. Its principal structure is volcanick matter, the base of the cone measuring eighty-seven miles in circumference; and the fields of lava extend to twice this distance, cultivated and populous. Numerous minor cones are seen at different points; and the chief cone has fallen in frequently. From the earliest traditionary eras, Etna has been active.

The next important volcanick region is Iceland. Hecla has been subject to unceasing eruptions six years consecutively. New islands have been cast up, and hills thrown down; floods of lava, have inundated the country; and numerous hot springs have burst forth in various directions.

From the discovery of the new world till June 1759, Jorrullo was in repose. It stands upon a plateau, two or three thousand feet above the level of the sea, six hundred feet high, bounded by hills of basalt, trachyte, and volcanick tuffa, with six volcanoes of scoriæ, and fragments of lava round it. Among the Canary isles are evidences of the renewal of the fires of a central crater, and the almost entire cessation of a series of irregular eruptions from lesser independent cones, the great habitual vent being nearly filled up, eruptions still going on, and new cones and craters forming every day; showing that the forces thus in operation converge in some volcanick archipelago when the central cone is inactive.

Modern lavas are nearly one-half composed of felspar, and when in great excess the mass is *trachytick;* and when augite predominates, *basaltick.* In the granitick and other ancient rocks there is an abundance of quartz, usually referred to *igneous* action; whereas quartz is merely silex crystallized, and is rarely found in modern lavas. Horne-blende is also equally rare in modern, though commonly found in ancient lavas.

Within the last century the great five European volcanoes of Vesuvius, Etna, Volcano, Sauterin, and Iceland, appear to have experienced fifty recorded eruptions, independently of many which have escaped notice, from occurring in the Grecian Sea, and the neighbourhood of Iceland, as submarine convulsions. So many indeed have thus passed off, that it is calculated at most, that the active volcanoes constitute one fortieth only of those which have taken place upon the entire globe. The general calculation of the numbers of eruptions is two thousand every century, or twenty per annum.

Earthquakes exhibit premonitory signs in the atmosphere, which are well known to observers in volcanick regions. The seasons are usually irregular previous to such phenomena, and are accompanied with sudden gusts of wind and dead calms, unusual and violent rains, the sun's disk putting on a fiery redness, haziness of the air, bodies of inflammable gas from electrical matter, sulphureous or mephitick vapours, subterranean noises like the rolling of carriages, thunder, or artillery; animals every where appear alarmed instinctively, and utter cries; and people feel dizzy, and as if sea-sick. During the last hundred and fifty years, earthquakes have produced great changes upon the globe, and the devastations made by them have been attended with great loss of human life and property. Casualties on a great scale have been common; lakes have appeared where dry ground previously existed, and rivers have risen and overwhelmed every thing for miles around. Villages and cities have been swallowed up, "and towers toppled on their warders' heads." Mountains have been laid low, and hills raised, and islands have appeared and disappeared suddenly. Houses have been known to be affected with a vertical movement, and transported to distant spots. In 1829, the city of Murcia, in the south of Spain, suffered dreadfully from a shock on the 21st of March. So did Bogota, on the 16th of November, 1817; and Chili, on the 19th of November, 1822; and the shock extended twelve hundred miles from north to south, injuring many towns, and filling up rivers. In 1822, Aleppo was destroyed. From the 15th of February to the 16th of March, in 1820, the Ionian Islands were convulsed. In April 1815, the islands of Sumbawa experienced a shock, which was felt seventy miles in a direct line, accompanied by whirlwinds and other atmospherick phenomena, and the explosion was heard in Sumatra, nine hundred miles distant. In 1811, South Carolina experienced great changes of level. Lakes and islands were created in the valley of the Mississippi. The Aleutian Islands were disturbed in 1806 and 1814, and new rocks appeared above the waters. The whole coast of Chili has been permanently raised. Shallow channels have been rendered navigable; and the town of Tomboro, with twelve thousand persons was submerged. These are a few only of the numerous catastrophes on record, but which alone are sufficient to convince any reasonable being that our planet has not as yet settled down into a state of permanent repose and inactivity. Who has not heard or read of the Caraccas, Sicily, Java, Chili, Calabria, &c., associated with earthquakes in our own time! And if we go back a little farther, we find these and other volcanick countries periodically disturbed. Who can forget the affecting narrative of that most tremendous explosion which shook Lisbon to the ground, in 1755, upon the 1st of November, when sixty thousand persons were destroyed in the short space of six minutes; and the sea, after retiring, and laying the mouth of the Tagus dry, rolled suddenly and impetuously back, rising to the height of fifty feet. The scene must have been grand and appalling, and such as is so forcibly described in the Scriptures to have immediately followed the crucifixion. Surrounding mountains were rent asunder, and flames of fire and thick clouds of smoke burst forth on all sides from the heaving earth. The splendid new marble quay was sunk, and a great number of boats were overwhelmed. The most sensible movements were felt in Spain, Portugal and Northern Africa; but nearly all Europe recognised some shock, which was extended even to the West Indies. A sea-port town called St. Eudal's twenty miles south of Lisbon was engulfed. A village near Morocco was swallowed up. A wave sixty feet high, at Cadiz, found an entrance there, and swept the coast of Spain. At Tangiers the waters alternately rose and fell eighteen times. At Funchal the sea rose fifteen feet above high-water mark. At Kinsale, in Ireland, the sea entered a port, and rolled with irresistible force round the market-place. The lake of Lochlomond in Scotland also rose.

St. Domingo, Conception, and Peru, are associated with still more devastating circumstances; and the total loss of Lima, at earlier periods. Jamaica suffered dreadful havock, as did Teneriffe, Java, Quito, Sicily, and the Moluccas, in the seventeenth and eighteenth centuries, within a period of one hundred and forty years. But there can be no doubt of the recorded catastrophes not being all which have occurred. Many have probably not been known from their wrecks having eluded search.

The relative levels of land and sea have frequently changed from the shocks of earthquakes in many places, as buildings, such as ancient temples, &c., on the coast indicate, when their present is compared with their former traditional state—pillars being formerly hid which are now above water, and some immersed which were built on dry land, together with other traces of the advance or receding of the sea. These appearances have originated much controversy in attempting to draw geological inferences; but it is justly considered that, as the ocean maintains a permanent level, such indications show the coast land to have been verging at different periods, or subsiding and becoming elevated alternately.

The physical history of the globe is much illustrated by the various changes which have occurred on its surface from earthquakes, not merely during the last century, but anciently. Former states of the earth, not being usually considered as capable of explanntion from causes now in operation, have been left more to conjecture than those solid proofs which we recognise by an appeal to modern phenomena. Nor are the successive changes from subterranean movements less in the interiour than upon the crust of the earth; the former, indeed, indicate a much greater degree of commotion in the terrestrial abysses than above.

The subterranean regions are evidently subject to peculiar chymical and mechanical changes. Long series of internal convulsions have thrown up deposites several miles above the level of the ocean which have been formerly below its bottom. Many rocks now appear jutting out of the sea, which once lay several miles deep beneath. The sources of all volcanick fire must be always very deep; and before this fact was known, igneous phenomena were referred to atmospherick operations. We are indeed taught to consider the occasional obstructions to the draining of a country, the creation of lakes and pools from subsidences or landslips, and the conversion of shallow waters into rain by evaporation, whirlwinds and other atmospherick phenomena, to proceed from the same sources as those from which volcanick phenomena arise. In most instances of volcanoes, they are either close to the sea, or have some direct communication with it. Hence it is more than probable that the igneous changes are connected with hydrostatick pressure. The percolation of water through the earth affords sufficient steam for the most violent earthquakes, and in all cases of explosions steam is necessarily produced. During an eruption, an exhalation of aqueous vapour, muriatick acid, sulphur, with hydrogen or oxygen, carbonick acid and nitrogen, occurs from the decomposition of salt water. And thus we perceive the co-operation of fire and water in raising lava to the surface, below which there are always enormous masses of matter in a constant state of fusion, as we see for ages steam has been emitted from inactive volcanoes at a temperature above the boiling point. Reviewing the history of earthquakes and volcanoes, derived from the records of catastrophes attending them, and the geological evidences and illustrations afforded by modern science, we may conclude, in the words of Mr. Lyell, that "as to the agency of the subterranean movements, the constant repair of dry land, and the subserviency of our planet to the support of terrestrial as well as aquatick species, are secured by the elevating and depressing power of the earthquakes. And that this cause, so often the source of death and terrour to the inhabitants of the globe, which visits in succession every zone and fills the earth with monuments of ruin and disorder, is, nevertheless, a *conservative* principle in the highest degree, and above all others essential to the stability of the system."

An eruption of great magnitude has recently occurred threatening the destruction of Bronti. The appearance of a fiery column, extending to a great height, and forming a beautiful arch, and to which was added a blue pillar (arising from sulphureous matter) is described in letters from the island. But it appears to be generally admitted, that the arched column itself is the effect of reflection from the impending clouds above, since no hydrogen has been recognised as emitted from the crater, and since, if the phenomena arose from the combustion of such an inflammable gas in the atmosphere, no small shower of rain would be simultaneously precipitated. The inhabitants of Bronti, about fifteen miles from the base of the mountain, were kept some time in the utmost terrour and suspense, from a river of burning lava, which gradually approached their city. Many fled in despair, and those who remained were in hourly expectation of the fate of Herculaneum. A canal was hastily dug and walled in; and the last accounts stated, that Bronti was secured from the threatened inundation of the fiery flood when it approached within about a quarter of a mile of the town:—the course of the devouring fluid having been successfully diverted.—*Frazer's Mag.*

INTEMPERANCE.

The following fact, as related by Prof. Sewall is a serious warning to men who drink ardent spirits.

"A man was taken up dead in the streets of London, after having drank a great quantity of gin on a wager. He was carried to Westminster Hospital and there dissected. In the ventricles of the brain, was found a considerable quantity of limpid fluid, impregnated with gin, both to the sense of smell and taste, and even to the test of inflammability. The liquid appeared to the senses of the examining students as strong as one-third gin and two-thirds water."

What strange infatuation is it that tempts men to drink alcoholick liquors, when facts, and reason, and nature and religion, are continually warning them of the inevitable train of disasters and evils consequent thereon! When our senses warn us of the immediate danger of a precipice close at hand, have we not prudence to avoid it, clinging to life as we do with a cowardly tenacity? And when physicians demonstrate to us the poisonous, deadly influence of ardent spirits upon the system, and all experience illustrates the truth, why have not men sense and consistency enough to forsake the miserably foolish indulgence of drinking the poison. No rational man, who could once feel sensible of the delights of temperance, would unless by an infatuation as gross as insanity ever be tempted into its opposite. And no individual who can in truth profess to be virtuous or patriotick, can consistently with that profession, ever give countenance to intemperance in others, by the contagious influence of his own example.

AUTUMN.—By W. C. Bryant.

The melancholy days are come, the saddest of the year,
Of wailing winds and naked wood, and meadows brown and sere,
Heap'd in the hollows of the grove the withered leaves lie dead.
They rustle to the eddying gust and to the rabbit's tread.
The robin and the wren are flown, and from the shrubs the jay,
And from the wood-top calls the crow, through all the gloomy day.

Where are the flowers, the fair young flowers, that lately sprung and stood,
In brighter light and softer airs, a beauteous sisterhood?
Alas! they all are in their graves—the gentle race of flowers
Are lying in their gentle beds, with the fair and good of ours:
The rain is falling where they lie—but the cold November rain
Calls not from out the gloomy earth the lovely ones again.

The windflower and the violet, they perish'd long ago;
And the brier-rose and the orchis died, amid the summer glow
But on the hill the golden rod, and the aster in the wood,
And the yellow sunflower by the brook in autumn beauty stood,
Till fell the frost from the clear cold heaven, as falls the plague on men,
And the brightness of their smile was gone from upland glade and glen.

And now when comes the calm mild day—as still such days will come,
To call the squirrel and the bee from out their winter home;
When the sound of dropping nuts is heard, though all the trees are still,
And twinkle in the smoky light the waters of the rill,
The south wind searches for the flowers whose fragrance late he bore,
And sighs to find them in the wood and by the stream no more.

And then I think of one who in her youthful beauty died,
The fair meek blossom that grew up and faded by my side.
In the cold moist earth we laid her, when the forest cast the leaf,
And we wept that one so lovely should have a lot so brief!
Yet not unmeet it was that one, like that young friend of ours,
So gentle and so beautiful, should perish with the flowers.

THE INDIAN BOA.

The serpents form a division of the reptile class too well known by their elongated scaly bodies, and their total deprivation of external members, to require any minute description of their organization. They are also held by the generality of mankind in so much abhorrence, and regarded for the most part with such strong feelings of unmitigated disgust, that we feel but little inclined to dwell upon their history, how much soever they may on many accounts be considered as deserving of a more extended notice.

They are frequently divided into two great sections; the one, which is by far the most numerous, comprehending all those in which the poison-fangs are wanting, and which are consequently dangerous only in proportion to the extent of their muscular force; and the other consisting of those in which the fangs are present, and the bite of which is accompanied with the pouring out of a venomous secretion. At the head of the first of these divisions rank the Boas, which in the Linnean arrangement comprehend all those snakes, whether venomous or not, whose under surface was covered with narrow transverse plates, and whose tail was destitute of rattle. Later zoologists have, however, confined that appellation to those among the Linnean Boas, which are without poisonous fangs and have claws near the vent, and have regarded as a distinct genus the snakes which in addition to these latter characters have the scales of the under surface of the tail so arranged as to form two distinct rows. To the latter, which inhabit the Old Continent exclusively (while the former are all of them natives of America,) they have assigned the name of Python.

The present species, which is commonly exhibited under the popular but erroneous title of the Boa Constrictor, appears to be the Pedda Poda of Dr. Russel's Indian Serpents. It is said by that writer to attain a length of eight or ten feet; but living specimens have been brought to England of twice that size, and some of those now in the Tower are fifteen or sixteen feet long. The number of transverse plates on the under surface of the body is stated to be two hundred and fifty-two, and that of the pairs of scales beneath the tail sixty-two. The back is elegantly marked with a series of large irregular black blotches bordered with black; and numerous smaller spots are scattered along the sides. The ground colour is yellowish brown, lighter beneath.

The extent of muscular power which these serpents possess in common with the Boas is truly wonderful. To the smaller among them the lesser quadrupeds and even birds fall an easy prey; but the larger, when excited by the stimulus of hunger, are capable of crushing within their spiral folds the largest and most powerful of beasts. The sturdy buffalo and the agile stag become alike the victims of their fatal embrace; and the bulk of these animals presents but little obstacle to their being swallowed entire by the tremendous reptile, which crushes them as it were into a mass, lubricates them with the fetid mucus secreted in its stomach, and then slowly distending its jaws and œsophagus to an extent proportioned to the magnitude of the object to be devoured, and frequently exceeding by many times its own previous size, swallows it by one gradual and long-continued effort.

Of the mode in which this operation is effected, a detailed description is contained in MacLeod's Voyage of His Majesty's ship Alceste; and an excellent account has been subsequently given by Mr. Broderip in the second volume of the Zoological Journal from actual observation of the specimens now in the Tower. The vivid description of the latter almost brings before the reader's eye the lightning dash of the serpent; the single scream of its instantly enfolded victim, whose heaving flanks proclaimed that it still breathed; and its last desperate effort, succeeded by the application of another and a deadly coil. With equal force and fidelity it sketches the continuation of the scene, when the serpent, after slowly disengaging his folds placed his head opposite to that of his victim, coiled himself once more around it to compress it into the narrowest possible compass, and then gradually propelled it into his separated jaws and dilated throat; and finally presents a disgusting picture of the snake when his meal was at an end, with his loose and apparently dislocated jaws, dropping with the superfluous mucus which had been poured forth.

In a book published in London some years ago, called Curiosities of Nature and Art, there is an account of this animal which would at first view seem to be altogether fabulous. The book says:

"It was, in all probability, an enormous specimen of this very serpent which once threw a whole Roman army into dismay. The fact is recorded by Valerius Maximus, who quotes it from one of the lost books of Livy, where it was detailed at a greater length. He relates that, near the river Bagrada, in Africa, a snake was seen of so enormous a magnitude, as to prevent the army of Attilius Regulus from the use of the river; and which, after having snatched up several soldiers with its enormous mouth, and killed several others by striking and squeezing them with the spires of its tail, was at length destroyed by assailing it with all the force of military engines, and showers of stones, after it had withstood the attack of their spears and darts. It was regarded by the whole army as a more formidable enemy than even Carthage itself. The whole adjacent region was tainted with the pestilential effluvia proceeding from its remains, as were the waters with its blood, so as to oblige the Roman army to shift its station. The skin of this monster, measuring in length one hundred and twenty feet, was sent to Rome as a trophy, and was there suspended in a temple, where it remained till the time of the Numidian war."

We cannot positively assert this to be untrue; but were such an account given of the appearance of a similar monster in modern times it would be difficult to find credulity enough to admit even the possibility of its being true, unless it partook of the nature of the Sea-Serpent of Massachusetts Bay, and lived in the water, the element above all others most prolifick in monsters. But after all there are as many reasons favouring the belief that such a tremendous serpent existed in older days, as there are to disbelieve it. It is natural to suppose that the superstition of those days would exaggerate every slight discrepancy in the order of nature; but when we have the evidence even in our own soil of the primeval existence of monsters at least four times larger than the largest animals that at present inhabit the land, we cannot consistently reject the statement of the before mentioned book. Bones of lizards have been rescued from the soil of the western states, which must have been according to Mr. Flint at least eighty feet long! Does it seem improbable therefore, with such analogy before us, that a species of the Boa one hundred and twenty feet long could have existed in Africa or India in the days of monsters? Other things being equal, there is no reason why we should discredit the statement.

The engraving at the head of this article represents this tremendous serpent, and the manner in which the natives skin them. They tie a rope around the neck, and suspend the snake to the limb of a tree: they then climb to the limb, cut the skin around the neck, and embracing the serpent at that point allow themselves to slide down the monster's length, bringing the skin with them. These serpents are natives of the East Indies.

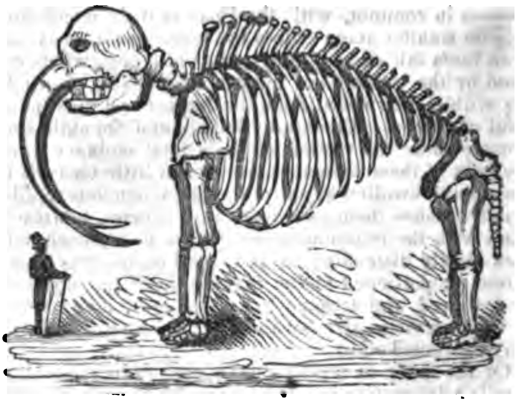
THE VICISSITUDES OF LIFE.

The editor of a new paper called the Mechanick's Banner, recently commenced at Baltimore, meets with a multitude of perplexities at the very outset of his career, which gives occasion for the production of the following true picture.

The clergyman, as he weeps over his stubborn flock, and sees them in spite of his prayers and entreaties pursuing "the errour of their way," exclaims, "surely none have difficulties like the minister;" and the physician, as he rouses from his midnight sleep to encounter the chilling winds of winter, and comes shivering to the bedside of his patient, rubs his thumb over his lancet, and says, "would that I had never been a doctor." The farmer, as he tills his land, from the rising of the sun until the going down of the same, "sowing his seed in the morning, and on the evening withholding not his hand," stands kimbo upon some sun-parched field, and as he views the scorched grain and withered grass, bending their tops to the burning soil, with a smileless lip he says, "wo is me, for my troubles are past endurance;" and the slave, as he lifts his hand from the spade that is worn smooth by his grasp, raises his fettered arm towards the heavens, and execrates the light that hails him to his toil. The politician pores for years over some splendid scheme, and fancies the day not far distant when he shall fill to the brim the measure of his own with his country's glory; he starts as the tide of publick opinion comes rolling against him, resistless as the Simoon of the sandy desert, and the dying away of the winds bears his moan upon their bosom—"vain and vexatious are the pursuits of the statesman." The lawyer ransacks the musty doings of past ages—studies hard and long to effect the overthrow of his opponent, piles up and pulls down, and turns over and over again the pages of innumerable volumes, speeds his way, loaded with books to the court room, contemplates his success, and already fancies his name to be recorded upon the highest Collocate upon the column of fame. He lifts his voice amid the learned assembly, and the plaudits of the admiring multitude cheer him onward. He submits his case to the jury, and retires from the court flushed with satisfaction, and blushing beneath the high honours of his auditory; he seeks his client, and tells him to rejoice, and like a hero returning from his victory with the laurel of triumph upon his fevered brow, he enjoys a momentary glow of exalted pleasure; but, alas for him, the return of the jury reverse the verdict his own imagination has conceived, and he hates the hour he was born. The merchant tarries till the breaking of the day at his gas light desk, and counts and calculates with a sleepless age, and an anxious heart; thousands are his due, but they are held by his fellow-men; he fondly believes it all secure, and exults in the *expectation* of happiness; one failure, and another, and another take place; he denounces the whole human race, and in the moments of his distress reflects upon all the world of men as scoundrels but himself.

The warriour, as he rushes to the crimson plain, covers his course with the bodies of the dead, and as he sinks with the steel in his heart, his last cry is "the soldier's career is attended with doubt, danger, and difficulty, and his reward is death." The sailor springs from his hammock slumbers, and as he mounts the yards, in the solitary watch of the night, mingles with his "yo heave" a curse upon the difficulties of life. The mechanick toils from sun to sun, and as he returns from the monotony of his daily avocation, he ponders over his oppressed situation,—his home, his wife, his children, all gather about his heart; the feelings of his nature rive him to the quick, and he fain would lift his arm and cry, *these things shall not be*, but finds it fettered, and his free-born soul is goaded by the scorpion sting of imposition, as he bends his neck again to his slavish toil. But the printer, the poor printer—who shall begin to sum up the amount of his difficulties? Human language and human effort are inadequate, and human calculation, with all its catalogue of human woes, reach not the deep recess where spring the printer's difficulties. The tears of the clergyman, the shivering of the physician, the fears of the farmer, the distresses of the slave, the failures of the politician, the mortifications of the merchant, the despair of the conquered soldier, the woes of the sailor, and the mechanick's bitter reflections—all, all, and a myriad more, harrow the printer's heart. The calendar of human evil, like the solar sun, sends its converging rays, and all concentrate upon the printer's head. The printer must hear every thing, feel every thing, see every thing, know every thing, and tell it in the right time, or he knows nothing about his business; he must be a very Proteus in every sense of the word; his calvarium must be marked by every bump in Gall and Spurzheim, and then he will do well to prepare himself for abuse and fault-finding. We have said all of the above, courteous reader, by way of apology for the long delay of the second number of our paper; and if we have not said enough, may the shades of Charon help us, for we had better gather up our spoils and prepare for a journey across the Stygian Lake. We are inclined to think that we will never commit the sin of getting up another paper. We saw difficulties in the commencement, and prepared to surmount them; but the strained imaginations of the most untramelled poet never conceived, in his boldest flight, the Alpha of our troubles: what the Omega shall be, time must write.

THE MAMMOTH OF THE NORTH.



When Captain Beechey returned to England after his voyage to the Pacific Ocean, he carried home a large quantity of the petrified or stone remains of elephants and other animals, which were found imbedded in the cliffs of frozen mud within Behring's Strait, and in various parts of the Northern Seas. The most perfect specimens of these remarkable fossils as they are called, are preserved in the British Museum.

That these remains formed parts of animals once living on this earth, no one can doubt. But on examining these bones, various difficulties present themselves, requiring much patience and extensive knowledge satisfactorily to remove. There is one circumstance connected with them which has especially engaged the thoughts of the learned: the animals of which many of these bones were the remains, are never found in our days alive in those cold regions of the north, but are natives of the south or tropical parts of the globe; and many as in the case of the fossil elephant, belonged to a species not at present met with in any part of the known world. The professor of Geology at Oxford, Dr. Buckland was requested to examine the collection brought home by Captain Beechey, and to prepare a description of them.

Professor Buckland compares the accounts brought home by these voyagers, (especially that of Mr. Collie, surgeon to the expedition) with the description of similar discoveries by other writers, and with the result of his own researches and observations. He thus endeavours to throw "some light upon the curious and perplexing question, as to what was the climate of this portion of the world at the time when it was inhabited by animals now so foreign to it as the elephant and rhinoceros; and as to the manner in which not only their teeth and tusks, and other portions of their skeletons, but in some remarkable instances, the entire carcasses of these beasts, with their flesh and skin still perfect, became entombed in ice, or in frozen mud and gravel, over such extensive and distant regions of the north." It is stated by the celebrated naturalist, Pallas, that throughout the whole of northern Asia, from the river Don to the extreme point nearest America, there is scarcely any great river in whose banks they do not find the bones of elephants and other large animals, which cannot now endure the climate of the district; and that all the fossil ivory collected for sale throughout Siberia, is found in the lofty, steep and sandy banks of the rivers of that country; and that the bones of large and small animals lie in some places piled together in great heaps; but in general they are scattered separately, as if they had been agitated by waters, and buried in mud and gravel.

The term "Mammoth" has been applied indiscriminately to all the largest species of fossil animals. It is a word from the Tartar language, and means simply "Animal of the Earth." It is now used only to signify the fossil elephant. Of all the remains that have ever been discovered, the most remarkable is the entire carcass of a Mammoth, not petrified but merely frozen, with its flesh, skin, and hair, fresh and well preserved. How many thousand years it might have so kept from corruption in its icy coffin, it is impossible to say. In the year 1803 it fell from a frozen cliff in Siberia, near the mouth of the river Lena. Nearly five years elapsed between the period when the carcass was first observed by a Tungusian in the thawing cliff, in 1799, and the moment when it became entirely loosened and fell down upon the strand between the shore and the base of the cliff. Here it lay two more years, till the greater part of the flesh was devoured by wolves and bears. The skeleton was then collected by Mr. Adams, and sent to Petersburgh. Some idea may be formed of the size of this enormous animal, from the fact that the head without the tusks, weighed four hundred and fourteen pounds; the tusks together weighed three hundred and sixty pounds. Great part of the skin of the body was preserved, and was covered with reddish wool and black hairs; about thirty-six pounds weight of hair was collected from the sand, into which it had been trampled by the bears.

Cuvier, whose opinions on these subjects have been the most generally followed, concludes "that those animals, the bones and carcasses of which are found imbedded in the ice of the northern seas, once lived in that region in a climate totally different from its present intense cold; that some great change some time or other took place in the temperature, which destroyed the existing animals, or prevented them from continuing their species. This change must have been sudden; for if the cold had come on slowly and by degrees, the softer parts, by which the bones are found still covered, must have had time to decay, as we find in hotter climates. It would have been utterly impossible for an entire carcass like the vast monster discovered by Mr. Adams, to have preserved its hair and its flesh without corruption, had it not *immediately* been encased in the ice which preserved it to our times."

What was the true nature and character of those animals of whose existence these fossil remains are the only evidence we have, science probably never will be able to discover. Some time since Dr. Buckland was said to be engaged in writing a work upon these animal remains, and upon the evidence borne in the science of geology to the truth of revealed religion. The materials are abundant for a most important and interesting work. For a learned and interesting dissertation on the fossil remains of our own states and the continent, we would refer the reader to De Witt Clinton's discourse before the New York Philosophical Society. In a future number we will introduce the skeleton of the Siberian Mammoth, that of the South American Mammoth, and the Mammoth of the Western States.

AMERICAN ANTIQUITIES.

In making excavations in the gold region of this State not long since, buildings regularly erected were discovered under the earth. Traces have also been met which prove that the mining business has, at some time, been followed in the same district of country, as well as in North Carolina—by whom, or at what period, it is impossible now to discover. The mounds of the west have long been a subject of interest to the traveller, and speculation to the antiquary; but a writer from Arkansas, in the Charlestown Observer, states some more facts yet more interesting. On the banks of White River, he says, you can see the brick foundation of houses—a few miles further six hundred and forty acres of land are inclosed by a wall, in the centre of which is a circular building—there is also in the same neighbourhood the ruins of a city; and parallel streets crossing each other at right angles, may be traced by brick foundations one mile in length—the bricks of modern shape. The whole west is rich in objects of interest to the antiquarian and the naturalist.

By the accounts of Mr. Flint, and other travellers, says a Western paper, it appears that the impress of the leaves of the fruit tree and the bamboo, have frequently been found in the peat beds, and fossil coal formations in the neighbourhood of the Ohio. Pebbles of disruption, vast rocks, earth and sands, specimens of organick, animal and vegetable remains, belonging to a tropical climate, clearly indicate some important extensive changes occasioned by fire or water in the whole great valley of the Mississippi. Then the regular wells, the bricks, the medals, the implements of iron and copper, buried in a soil which must have been undisturbed for ages, with the alphabetick character written on the cliffs, as plainly show that other races of men passed away.—And what a world, says Mr. Flint, must that have been when the mammoth and the melogonyx trod the plains, and monstrous lizards, whose bones are now rescued from the soil, and which must have been at least eighty feet long, reared their heads from the rivers and lakes!—

Augusta (Geo.) Trans.

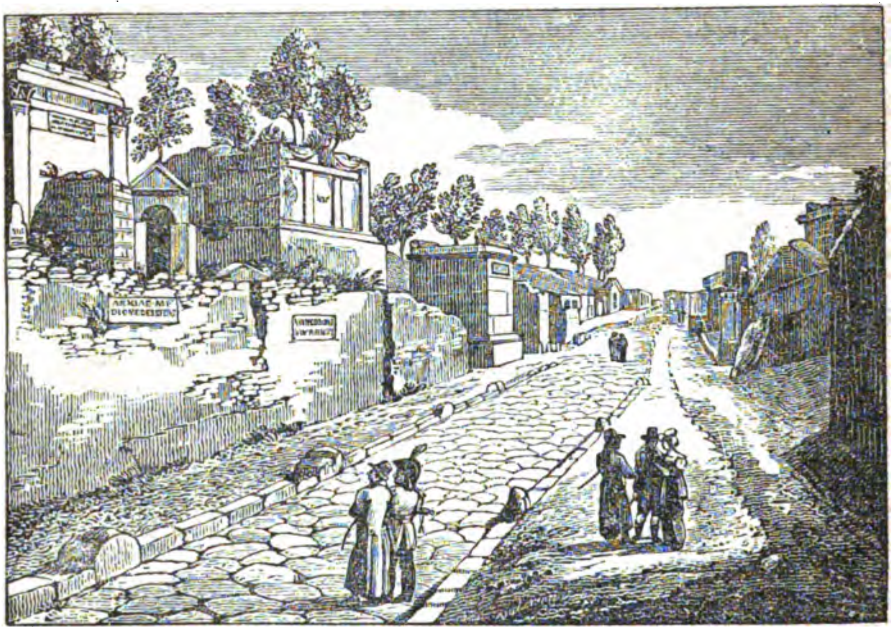
SUBSTITUTE FOR LINEN.

There has recently been discovered, in Salem, Mass., and patented, a new and beautiful material, resembling silk and linen, which holds out to the manufacturers of this country high promise of an original, beautiful, and invaluable fabrick, far surpassing in strength and beauty of texture that of linen, which it is destined wholly to supersede, as the culture of it requires much less labour and expense than flax, and does not, like that and similar materials, require to be renewed annually, (being a perennial,) and the preparation of it for manufacturing being far more simple than either; and its great natural affinity for colouring matters, and its requiring no bleaching, being objects of the highest importance, gives it a very decided preference over that manufacture. A few specimens of the manufacture of this material into small fancy articles have been produced, some of which being coloured of various tints present such a beautiful silk-like appearance as to have been actually, in some instances, mistaken for it; it possesses this decided advantage, that it not only sustains the action of water uninjured and undefaced, (which it is well known silk will not do,) but the repeated action of water rather appears to strengthen and beautify it. It is ascertained to be the opinion at Lowell, where they have offered to make the experiment, that it can be spun upon machinery.

And while it offers to other branches of manufacture very different substitutes for those substances hitherto used, it offers a material very superiour, in many points, for paper. It is believed, from some specimens already produced, that paper of every description may be manufactured from it, possessing a pearly whiteness, durability, beauty of texture, and smoothness of surface unrivalled by any other ever before manufactured in any country. And it is susceptible of the most brilliant colours, in grain or otherwise. This is believed to be the first material of the kind ever before discovered in this country, that holds out the prospect of a staple commodity, silk, linen, and cotton being exotick; but this material is indigenous, is a native of this country, discovered by a native citizen, one of her own daughters, which circumstances, together with its intrinsick worth, seem peculiarly to enhance its value to us. It is open to any one who may wish to make experiments. *Silliman's Jour.*

A MAN WITHOUT IMAGINATION.

Once, in an excursion to the north I fell into conversation with a Sussex farmer, one of that race of sturdy, rich and independent English yeomen, of which I am afraid few specimens remain: he was quite a character in his way. I must sketch him for you; but only Miss Mitford could do him justice. His coat was of the finest broad-cloth; his shirt-frill, in which was stuck a huge agate pin, and his neck-cloth were both white as the snow; his good beaver shone in all its pristine gloss, and an enormous bunch of gold seals adorned his watch-chain; his voice was loud and dictatorial, and his language surprisingly good and flowing, though tinctured with a little coarseness and a few provincialisms. He had made up his mind about the reform bill—the catholick question—the corn laws—and about things in general, and things in particular; he had doubts about nothing: it was evident that he was accustomed to lay down the law in his own village—that he was the tyrant of his own fireside—that his wife was "his horse, his ox, his ass, his any thing," while his sons went to college, and his daughters played on the piano. London was to him merely a vast congregation of pestilential vapours—a receptacle of thieves, cut-throats and profligates—a place in which no sensible man, who had a care for his life, his health, or his pockets would willingly set his foot; he thanked God that he never spent but two nights in the metropolis, and at intervals of twenty-seven years: the first night he had passed in the streets, in dread of fire and vermin; and on the last occasion, he had not ventured beyond Smithfield. What he did not know, was to him not worth knowing; and the word *French*, which comprised all that was foreign, he used as a term, expressing the most unbounded abhorrence, pity, and contempt. I should add, that though rustick, and arrogant, and prejudiced, he was not vulgar. We were at an inn, on the borders of Leicestershire, through which we had both recently travelled; my farmer was enthusiastick in his admiration of the country. "A fine country, madam—a beautiful country—a splendid country!" "Do you call it a fine country?" said I, absently, my head full of the Alps and Apennines, the Pyrenees, and the river Po. "To be sure I do; and where would you see a finer?" "I did not see any thing very picturesque," said I. "*Picturesque!*" he repeated, with some contempt; "I don't know what *you* call picturesque; but *I* say, give me a soil, that when you turn it up you have something for your pains; the fine soil makes the fine country, madam!"—*Mrs. Jamieson.*



ACCOUNT OF POMPEII.—VIEW UP THE STREET OF TOMBS, LOOKING TO THE GATES.

Pompeii was buried, with Herculaneum and Stabiæ, in an eruption of Mount Vesuvius; a description of which, with the calamitous event by which it was overwhelmed, we proceed to give.

Pompeii is a great and rich town, which, after lying eighteen centuries in a deep grave, is again shone upon by the sun, and stands amidst other cities, as much a stranger as any one of its former inhabitants would be among his descendants of the present day: such a town has not its equal in the world.

The distance from Naples to Pompeii is little more than ten English miles. Near the Torre dell' Annunziata, to the left, and amid hills planted with vineyards, the town itself, which, throwing off its shroud of ashes, came forth from its grave, breaks on the view. The buildings are without roofs, which are supposed to have been destroyed by an enemy in an unguarded state, or torn off by a hurricane. The tracks of the wheels which anciently rolled over the pavement are still visible. An elevated path runs by the side of the houses, for foot passengers; and, to enable them in rainy weather to pass more commodiously to the opposite side, large flat stones, three of which take up the width of the road, were laid at a distance from each other. As the carriages, in order to avoid these stones, were obliged to use the intermediate spaces, the tracks of the wheels are there most visible. The whole of the pavement is in good condition: it consists merely of considerable pieces of lava, which, however, are not cut, as at the present, into squares, and may have been on that account the more durable.

The entrance into Pompeii is through what is now called the Street of Tombs, of which a view is given in the accompanying engraving. The part which was first cleared is supposed to have been the main street of Pompeii; but this is much to be doubted, as the houses on both sides, with the exception of a few, were evidently the habitations of common citizens, and were small, and provided with booths. The street itself likewise is narrow: two carriages only could go abreast; and it is very uncertain whether it ran through the whole of the town; for, from the spot where the moderns discontinued digging, to that where they recommenced, and where the same street is supposed to have been again found, a wide tract is covered with vineyards, which may very well occupy the place of the most splendid streets and markets, still concealed underneath.

Among the objects which attract a particular attention, is a booth in which liquors were sold, and the marble table which bears the marks of the cups left by the drinkers. Next to this is a house, the threshold of which is inlaid with a black stone, on which is inscribed the word Salve, implying a salutation in token of hospitality. On entering the habitations, the visiter is struck by the strangeness of their construction. The middle of the house forms a square, something like the cross passages of a cloister, often surrounded by pillars: it is cleanly, and paved with party-coloured mosaick, which has an agreeable effect. In the middle is a cooling well; and on each side a little chamber, about ten or twelve feet square, but lofty, and painted with a fine red or yellow. The floor is of mosaick; and the door is made generally to serve as a window, there being but one apartment which receives light through a thick blue glass. Many of these rooms are supposed to have been bedchambers, because there is an elevated broad step, on which the bed may have stood, and because some of the pictures appear most appropriate to a sleeping room. Others are supposed to have been dressing rooms, on this account, that on the walls a Venus is described, decorated by the Graces; added to which little flasks and boxes of various descriptions have been found in them. The larger of these apartments served for dining rooms, and in some are to be met with suitable accommodations for cold and hot baths.

One of the houses belonged to a statuary, whose workshop is still full of the vestiges of his art. Another appears to have been inhabited by a surgeon, whose profession is equally evident from the instruments discovered in his chamber. A large country house near the gate undoubtedly belonged to a very wealthy man, and would in fact still invite inhabitants within its walls. It is very extensive, stands against a hill, and has many stories. Its finely decorated rooms are unusually spacious; and it has airy terraces, from which you look down into a pretty garden, that has been now again planted with flowers.—In the middle of this garden is a large fish pond, and near that an ascent, from which, on two sides, six pillars descend. The rear pillars are the highest, the middle somewhat lower, and the front the lowest: they appear, therefore, rather to have propped a sloping roof, than to have been destined for an arbour. A covered passage, resting on pillars, encloses the garden on three sides: it was painted, and probably served in rainy weather as an agreeable walk. Beneath is a fine arched cellar, which receives air and light from several openings from without; consequently its atmosphere is so pure, that in the hottest part of summer it is always refreshing. A number of *amphoræ*, or large wine vessels, are to be seen here still leaning against the wall, as the butler left them when he fetched up the last goblet of wine for his master. Had the inhabitants of Pompeii preserved these vessels with stoppers, wine might still have been found in them; but as it was, the stream of ashes rushing in, of course forced out the wine. More than twenty human skeletons of fugitives, who thought to save themselves here under ground, but who experienced a tenfold more cruel death than those suffered who were in the open air, were found within this cellar.

The destiny of the Pompeians must have been dreadful. It was not a stream of fire which encompassed their abodes: they could then have sought refuge in flight.—Neither did an earthquake swallow them up: sudden suffocation would then have spared them the pangs of a lingering death. *A rain of ashes buried them alive* BY DEGREES!

Pliny the Younger, who was an eyewitness of the memorable explosion of Vesuvius by which Pompeii was overwhelmed, has given an animated description of the scene, in a letter addressed to Tacitus, from which we extract the following passage:—

"A darkness suddenly overspread the country; not like the darkness of a moonless night; but like that of a closed room, in which the light is on a sudden extinguished. Women screamed, children moaned, men cried. Here, children were anxiously calling their parents; and there, parents were seeking their children, or husbands their wives: all recognised each other only by their cries. The former lamented their own fate, and the latter that of those dearest to them. Many wished for death, from the fear of dying: many called on the gods for assistance: others despaired of the existence of the gods, and thought this the last eternal night of the world. Actual dangers were magnified by unreal terrours. The earth continued to shake; and men, half distracted, reeled about, exaggerating their own fears, and those of others, by terrifying predictions."

Such is the frightful but true picture which Pliny gives us of the horrours of those who were, however, far from the extremity of their misery. But what must have been the feelings of the Pompeians, when the roaring of the mountain, and the quaking of the earth, awaked them from their first sleep? They attempted to escape; and, seizing the most valuable things they could lay their hands upon in the darkness and confusion, to seek their safety in flight. In the street before described and in front of the house marked with the friendly salutation on its threshold, seven skeletons were found: the first carried a lamp, and the rest had still between the bones of their fingers something that they wished to save. On a sudden they were overtaken by the storm which descended from Heaven, and buried in the grave thus made for them. Before the abovementioned country house was still a male skeleton, standing with a dish in his hand; and as he wore on his finger one of those rings which were allowed to be worn by Roman knights only, he is supposed to have been the master of the house, who had just opened the back-garden gate with the intent of flying, when the shower overwhelmed him. Several skeletons were found in the very posture in which they had breathed their last, without having been forced by the agonies of death to drop the things they had in their hands. This leads to a conjecture that the thick mass of ashes must have come down all at once, in such immense quantities as instantly to cover them. It cannot otherwise be imagined how the fugitives could all have been fixed, as it were by a charm, in their position; and in this manner their destiny was the less dreadful, seeing that death suddenly converted them into motionless statues, and thus was stripped of all the horrours with which the fears of the sufferers had clothed him in imagination. But what then must have been the pitiable condition of those who had taken refuge in the buildings and cellars? Buried in the thickest darkness, they were secluded from every thing but lingering torment; and who can paint to himself, without shuddering, a slow dissolution approaching, amid all the agonies of body and of mind? The soul recoils from the contemplation of such images.

"Pompeii," says Eustace, in his Classical Tour, "possesses a secret power that captivates and fixes, I had almost said, melts the soul. In other times and in other places, one single edifice, a temple, a theatre, a tomb, that had escaped the wreck of ages, would have enchanted us; nay, an arch, the remnant of a wall, even one solitary column, was beheld with veneration, but to discover a single ancient house, the abode of a Roman in his privacy, the scene of his domestick hours, was an object of fond but hopeless longing. Here, not a temple, nor a theatre, nor a column, nor a house, but a whole city, rises before us untouched, unaltered, the very same as it was eighteen hundred years ago, when inhabited by Romans. We range through the same streets, tread the very same pavement, behold the same walls, enter the same doors, and repose in the same apartments. We are surrounded by the same objects, and out of the same windows contemplate the same scenery. While you are wandering through the abandoned rooms, you may, without any great effort of the imagination, expect to meet some of the former inhabitants, or perhaps the master of the house himself, and almost feel like intruders who dread the appearance of any of the family. In the streets you are afraid of turning a corner, lest you should jostle a passenger; and on entering a house, the least sound startles, as if the proprietor was coming out of the back apartments. The traveller may long indulge the illusion; for not a voice is heard, not even the sound of a foot, to disturb the loneliness of the place, or interrupt his reflections. All around is silence; not the silence of solitude and repose, but of death and devastation,—the silence of a great city without one single inhabitant."—*Y. Inst.*

POTATOES.

One of the Reports of the "Board of Agriculture," states of this most useful and now universally well-known root, so kindly furnished by a kind Providence as an important article of food, that it is a native of America, and was familiar to the Indians before the conquest of Mexico and Peru. It was called by them, amongst other names, "openauk;" and in the history of Virginia, written by Herriot, a follower of Sir Walter Raleigh, and printed in 1588, is described as "a kinde of root of round form, some of the bigness of wallnuts, some farre greater, which are found in moist and marish ground, growing many together, one with the other, in ropes, as if they were fastened by a string." "Being boyled," he says, "or sodden, they are verie good meate."

Gerard, in his "Herbal," is the first author who gives the figure of the potato plant. He calls it by the name of "polarum tuberosum," which name has been followed by Linnæus and his disciples.

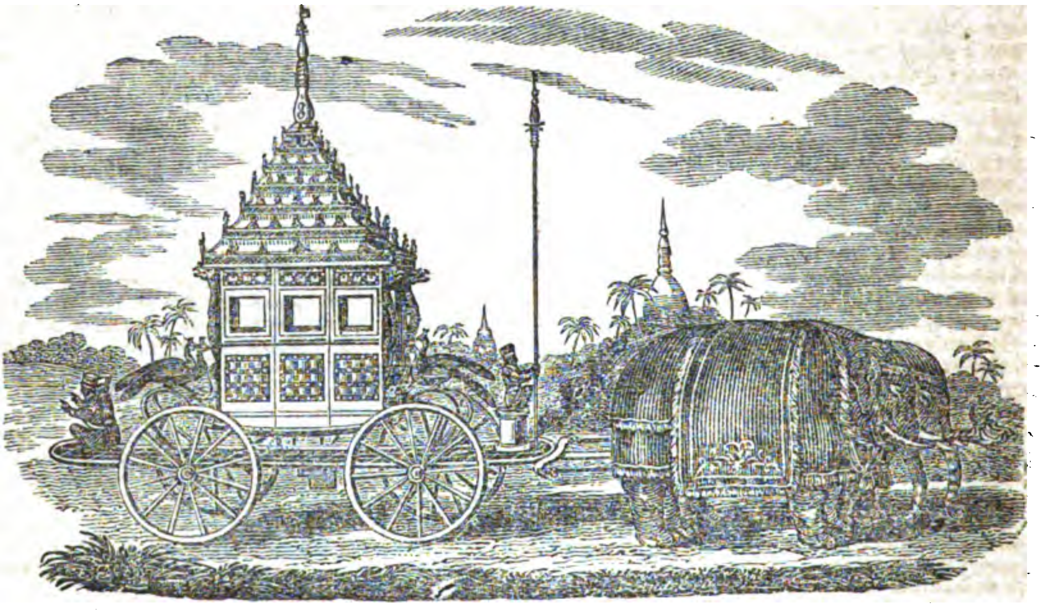
He says, "Their nutriment is as it were a mean between flesh and fruit, and being toasted in the embers they lose much of that windiness, especially being eaten sopped in wine. Of these roots may be made conserves no less toothsome, wholesome, and dainty, than of the flesh of quinces. They may serve as a ground or foundation whence the cunning confectioner or sugar-baker may work and frame many comfortable delicate conserves and restorative sweetmeats. They are used to be eaten roasted in the ashes. Some when they be so roasted, infuse them and sop them in wine; and others, to give them the greater grace in eating, do boil them with prunes, and so eat them. And likewise others dress them, being first roasted, with oil, vinegar and salt, every man according to his own taste and liking."

The author mentions that he had planted divers roots of them in his garden, where they flourished until winter, when they perished and rotted, but whether they flowered or not he was ignorant. He knew, however, that the best method in planting was to divide the roots as now practised.

Sir Walter Raleigh, after returning from America, in 1586, is said to have first given it to his gardener in Ireland, as a fine fruit from America, and which he desired him to plant in his kitchen-garden in the spring. In August, this plant flourished, and in September produced a fruit, but so different to the gardener's expectation, that in an ill humour he carried the potato apple to his master. "Is this," said he, "the fine fruit from America you prized so highly?" Sir Walter either was, or pretended to be ignorant of the matter, and told the gardener, since that was the case, to dig up the weed and throw it away. The gardener soon returned with a good parcel of potatoes.

It was cultivated in the gardens of the nobility and gentry early in the seventeenth century, as a curious exotick, and towards the close of it (1684) was planted out in the fields in small patches in Lancashire, from whence it was gradually propagated all over the kingdom, as well as in France.

Though tolerably common, they were in James the First's time considered as a great delicacy, and are noticed, among various other articles, to be provided for the queen's household; the quantity of them was at this time, however, extremely small, and the price what would now be thought excessive, namely, about forty-four cents per pound.



THE RATH, OR BURMESE IMPERIAL STATE CARRIAGE.

This magnificent object, of which a representation is given in the above wood-cut, was captured on the 9th of September, 1824, at Tavoy, an important maritime town of the Burman empire, by a detachment of the British army, under the command of lieutenant-colonel Miles, C. B., a gallant and distinguished officer in his Brittannick Majesty's service. It was taken to London, and exhibited in the Egyptian Hall, Piccadilly, for the gratification of the publick curiosity.

The seat, or throne, for the inside, is movable, so that when audience is given at any place the carriage may be destined to stop at, this throne can be taken out and used for the purpose. It is made of cane-work, very richly gilt, folds in the centre, is covered by a velvet cushion, and the front is studded with every variety of precious stone. To enumerate these would be a task of much labour; suffice it to say, that in it may be seen the onyx, cat's-eye, pearl, ruby, emerald, sapphire, both white and blue, coral, carbuncle, jargoon diamond, garnet, cornelian, &c., the whole being disposed and contrasted with the greatest taste and skill. The centre belt is particularly rich in stones, and the rose-like clusters or circles are uniformly composed of what is termed the stones of the orient: viz., pearl, coral, sapphire, cornelian, cat's-eye, emerald, and ruby. The same description of buffalo horn panels, which adorn the body of the carriage, will be found very ornamental on this throne, at each end of which are niches, for the reception of extraordinary Jos-god figures, called Sing, a mythological lion, very richly carved and gilt; the feet and teeth of these creatures are of pearl, the bodies covered with sapphires, hyacinths, emeralds, tourmalines, carbuncles, jargoon diamonds, and rubies; the eyes being of a curious tri-coloured sapphire. There are also six carved and gilt figures in a praying or supplicatory attitude, which are placed on the throne, and may be supposed to be interceding for the safety of the monarch: their eyes are rubies, their drop ear-rings cornelian, and their hair the light feather of the peacock.

The *chattah*, or umbrella, which overshadows the throne, is not so much for service, as for an emblem or representation of regal authority and power.

In order to convey some faint idea of the effect of the whole, representations of the white elephant have been added. It may be fairly presumed, that the caparisons of these animals would equal in splendour the richness of the carriage, but a display of this has not been attempted, our knowledge of the detail being necessarily imperfect, from the circumstance that one only of the elephants belonging to the carriage, was captured, the caparisons for both being, it is presumed, with the other which escaped. The semi-European youths, gaudily attired, may be supposed to have been placed on the neck of these ponderous animals, with small hooked spears to guide them, and the whole cortege, doubtless, combined all the great officers of state, priests and attendants, both male and female, and guards of every character and description.

This carriage fell into the hands of Col. Miles at Tavoy, an important maritime town on the Tenasserim coast.—Tavoy is a kingdom of itself, having a population of upwards of 100,000; it is governed by a viceroy, who has about 10,000 fighting men under his control. In its vicinity are some valuable gold and tin mines; the precious stones also found here are of great brilliancy, though not in such abundance as in other districts of the Burman empire. Its artificers are, however, of superior skill, and hence it is, that this spot was chosen for the construction of this carriage, in preference to the capital. With the carriage, the workmen who built it, and all their accounts, were captured by Col. Miles: from these it appeared, that it had been three years in building, that the gems were supplied from the king's treasury, or by contribution from the various states, and that the workmen were remunerated by the government: independent of these two very important items. the expenses were stated in the accounts to have been 25,000 rupees; (3125*l.*;) and, as the stones amount in number to no less than 20,000, it cannot be too high an estimate, to reckon the whole cost at a lac of rupees, (12,500*l.*,) which was its reputed value at Tavoy.

In the month of August, 1824, an expedition was placed under the command of Liet. Col. Miles, having for its object the running down the enemy's coast of Tenasserim, and seizing upon their valuable ports; this operation was executed with complete success, and with scarcely any loss. The expedition sailed from Rangoon on the 26th of August; it comprised his majesty's 89th regiment, 7th Madras infantry, some artillery, and other native troops, amounting in the whole to about 1000 men. The naval force, under the command of Captain Hardy, consisted of the Teignmouth, Mercury, Thetis Panang cruiser Jesse, with three gun-boats, three Malay prows, and two row boats. The expedition proceeded up the Tavoy river, which is full of shoals and natural difficulties, rendered still more hazardous by the means the enemy had adopted to increase them. Col. Miles, in his despatch to Sir A. Campbell, dated Tavoy, September 13th, apprises the general, that the place surrendered on the 9th, that he found it amazingly strong, having many mounted guns, &c. That the viceroy of the province, his son, and other persons of consequence, were his prisoners; that the population of the province was very great, the fighting men being about 10,000. Col. Miles adds, that he has also taken a new state carriage for the king of Ava, with one elephant only.—*Youth's Inst.*

View of the Origin and Migrations of the Polynesian Nation; demonstrating their Ancient Discovery and Progressive Settlement of the Continent of America. By John Dunmore, Lang, D. D., Principal of the Australian College, Sydney; Author of 'An Historical and Statistical Account of New South Wales. 12mo. pp. 256. Cochrane and Co. 1834.

[This is the title of a work recently published in England. According to our view of the case, the speculations of philosophers in reference to the origin of the American aborigines will be set at rest, by its clear and conclusive arguments.]

Dr. Lang's leading positions are,—that both the nations and the languages of China and Polynesia have sprung from the same ancient and prolifick source: that the line of demarcation, which Professor Blumenbach has attempted to draw between the Mongolian and the Malayan races of mankind is purely imaginary;—that the South Sea Islanders are of cognate origin with the Malays of the Indian Archipelago;—that both of these interesting divisions of the great family of man have originally been derived from the continent of Asia;—and that America was originally peopled, not as it is generally supposed, by way of the Aleutian Islands at the entrance of Behring's Straits, but by way of the South Sea Islands and across the widest part of the Pacific Ocean.

Pasquas, or Easter Island, which is inhabited by a branch of the Polynesian nation, is situated within one thousand eight hundred miles of the continent of America, but at the distance of not less than eight thousand miles from the Philippines. Are we not warranted, therefore, to conclude that the same causes that have evidently operated during a long succession of ages in carrying individuals of the Malayan race across so extensive an ocean, and to so vast a distance from the earlier settlements of their nation—filling every solitary isle in their trackless course with a numerous population.—may have also operated in carrying other individuals of that amphibious nation across the remaining tract of ocean to the coast of America? How many a canoe must have been ingulphed in the wide Pacific. and how many a feast of blood must have been enacted amid its *billowy boundlessness*, ere the solitary isle of Pasquas was discovered and settled! The event of a battle in that solitary isle, or one of the other accidents to which the rude natives of an island in the South Seas are necessarily exposed, may have given the first inhabitants to America.

* * * * * *

In short, from the peculiar character of their ancient civilization, from the manners and customs of their uncivilized tribes, and from the general structure and analogies of their language, I conceive we are warranted to conclude that the Indo-Americans are the same people as the South Sea Islanders, the Malays of the Indian Archipelago, and the Indo-Chinese nations of Eastern Asia; and that the continent of America was originally peopled from the scattered islands of the Pacific.

* * * * * *

Various circumstances in the aspect and history of the earlier postidiluvian nations warrant the conclusion that these nations, so far from being in a state of comparative barbarism as is generally, though gratuitously, supposed, had attained a considerable degree of civilization, and that they had derived that civilization from one common source.

After adverting, at length, to the great similarity of construction between the Mexican teocallis, or pyramids, and the temple of Bel, or Belus, at Babylon, and also to the pyramids of Egypt, Dr. Lang observes—

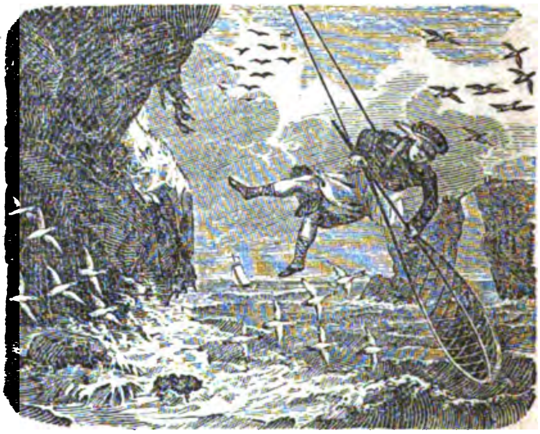
It would thus appear that the religious worship and the religious edifices of the Indo-Americans and the South Sea Islanders were an exact transcript of the worship and the edifices of the earliest and the most celebrated of the postdiluvian nations. The inference deducible from this remarkable fact is, that the forefathers of the Polynesian and Indo-American nations must have separated from the rest of mankind when the system of religious worship, that required the construction of pyramidal edifices, was generally prevalent—before the introduction of those more debasing systems of idolatry that characterized a later age, and in all probability within a few centuries of the deluge.

Baron Humboldt has exhibited a great variety of striking analogies of the astronomical system of the Mexicans and Peruvians to those of the ancient Egyptians, the Tartars, the Hindoos, and Japanese. He has also observed, that the arabesques or 'Greek ornaments,' on the walls of 'the palace of Mitla'—an interesting Indo-American ruin—'offer a striking analogy with those of the vases of lower Italy, and with others which we find spread over the surface of almost the whole of the old continent;' but perceiving no connecting link between the inhabitants of the new, and those of the old world, he adds, 'that analogies of this kind are very limited proofs of the ancient communications of nations.' They are no proof whatever of such communications; but they prove incontestibly that these nations must have derived their knowledge and their civilization contemporaneously from the same ancient and primitive source. And when we find precisely similar arabesques to those which the traveller admires on the walls of Mitla, or the ancient vases of Etruria, imprinted on the skin of the New Zealander, traced on his war club, or wrought into the border of his mat, we can scarcely fail to acknowledge that the South Sea Islands must have formed the link of communication between the old world and the new; and we can scarcely fail to acknowledge also that that link must have been formed in the very infancy of society, when the earth was still wet, as it were, with the waters of the deluge.

We conclude with the subjoined very striking passage:—

It would seem, therefore, that the first discoverers of America landed on the west coast of that continent, somewhere near the isthmus of Panama, at least from a thousand to fifteen hundred years before the birth of Christ; and that their immediate descendants, travelling northward and southward, formed powerful and flourishing empires in both continents, far surpassing in point of civilization the more recent empires of Montezuma and of the Incas of Peru. In these empires, all the knowledge and civilization that had survived the immense voyage across the Pacific Ocean were preserved and turned to account; but it seems doubtful whether the scion from the tree of knowledge which had thus been transplanted from Eastern Asia, and which evidently maintained its Asiatic life for many centuries, ever shot forth any additional branches in the American soil. The Mississippi—*the gathering of the waters*, as the word is said to signify in the Indian language—would serve as the grand conductor of civilization to the tribes that in successive ages advanced to the northward; and hence we find the remains of Indian *tumuli* and of Indian forts along the banks of the Ohio, and in the immediate vicinity of the lakes of Canada. But the dense forests of the Brazils, the pampas of La Plata, and the wilds of Patagonia were evidently less favourable for the preservation of the habitudes of Indian civilization; and hence we observe a gradual deterioration of the Indian race among the tribes that diverged into those regions from the parent settlements of the southern continent, till at length the wretched Brazilian cannibal or the miserable inhabitant of Terra del Fuego—paddling in his rude canoe in search of whale-blubber along the stormy headlands of his inhospitable isle—scarcely exhibits any evidence of his ancient descent from the bold and adventurous Malay, who had steered his beautifully carved galley from island to island across the vast Pacific, carrying along with him the knowledge and the primitive civilization of the East.

Dr. Lang's reasonings are, throughout his volume, extremely ingenious and acute, and, in many instances absolutely conclusive. Altogether, the volume is exceedingly curious, and replete with interest. They who enjoy such inquiries will do well to compare it with some recently published works; especially, 'Crawford's Embassy to the Court of Ava;' 'St. John's Egypt, and Mohammed Ali;' 'Gutzlaff's Sketch of Chinese History,' &c.



BIRD CATCHING IN SCOTLAND.

It is a common sport, or rather a frequent employment at St. Kilda and other islands in Scotland to gather among the crags the eggs of the sea-fowl, and catch the birds themselves; compared with this, the part of him who 'gathers samphire' on the Dover cliffs is one of safety and pleasure. In the cavities of the beetling craigs, the sea-fowl resort, and the natives, by means of a rope about their middle, overhang precipices nearly one fourth of a mile in height, merely to look over which, would disorder any common nerves. Yet the adventurer, with a line of many fathoms, held by several companions above, descends, and disengaging himself from the rope, enters cavities in the rock, higher than the arch of any Gothick church. This is not without danger; and many perish from falling stones and other casualties. It is recorded that one of these adventurers discovered that the rope by which he was suspended was so much chafed by an edge of a rock, that he hung by a single strand; he could not give immediate signals to his comrades, and when he was drawn up, it was found that the extremity of his terrour had been such, as to blanch his hair. From the tops of these dizzy precipices, the mountainous waves breaking below, seem like ripples, and the roar can hardly be heard.

We cannot close without speaking of the manners and habits of the inhabitants in other respects.

Gaelic is still the universal language of the Highlands, though English is spoken by those who are in the habit of visiting the Lowlands. The religion is Roman Catholick, and Presbyterian. In North and South Uist, and Lewis, the former is most prevalent. Presbyterianism is more common in the other islands. The women, with a few exceptions, are almost universally ugly, owing to hard work, and constant exposure to bad weather. The men are better looking, lazy and not strong. They are an improvident race; careless of the future, and extravagantly fond of dancing to the bagpipes and singing. Tobacco and whiskey are their great luxuries. The poverty of their food and wretched manner of living, render rheumatick complaints and premature decay very common, yet there are various instances of extraordinary longevity among the inhabitants. They are all good seamen, fearless and daring; and where they have been induced to emigrate, they have been usually remarked for quickness of perception, and a good natural capacity. But no land, however favoured by nature, or adorned by art, appears to the Highlander equal in beauty to his own barren rocks, and heathy moors; and in these Western Islands, scarcely an instance is known of any individual, however distant his wanderings, who has not returned to lay his bones in the shadow of his own native hills.

NEW YORK STATE ELECTION.

Hon. Wm. L. Marcy has been elected Governour of the state of New York. Majority about 13,000.

Hon. John Tracy is elected Lt. Governour by about the same majority.

As matters of record we give a list of the Members of Congress, that have been elected for this state. Those in roman are administration men; those in italics are anti-administration, there being nine of the latter and thirty one of the former.

1st	district—	Abel Huntington,* of Suffolk.
2d	"	Samuel Barton, of Richmond.
3d	"	C. C. Cambreleng,*
		Campbell P. White,*
		John McKeon
		Ely Moore, New-York.
4th	"	Aaron Ward,* of Westchester.
5th	"	Abm. Bockee,* of Dutchess.
6th	"	John W. Brown,* of Orange.
7th	"	Nicholas Sickles, of Ulster.
8th	"	Aaron Vanderpool,* of Columbia.
		Valentine Efner, of Scoharie.
9th	"	*Hiram P. Hunt*, of Rensselaer.
10th	"	Gerrit Y. Lansing,* of Albany.
11th	"	John Cramer,* of Saratoga.
12th	"	*David Russell*, of Washington
13th	"	Dudley Farlin, of Warren.
14th	"	Ransom H. Gillett,* St. Lawrence.
15th	"	Matthias J. Bovee, of Montg'y.
16th	"	Abijah Mann, jr.* of Herkimer.
17th	"	Samuel Beardsley,* of Oneida.
		Joel Turrill,* of Oswego.
18th	"	Daniel Wardwell,* of Jefferson.
19th	"	Sherman Page,* of Otsego.
20th	"	William Seymour, of Broome.
21st	"	William Mason, of Chenango.
22d	"	Joseph Reynolds, of Cortland.
		Stephen B. Leonard, of Tioga.
23d	"	Wm. Taylor,* of Onondaga.
		Wm. K. Fuller,* of Madison.
24th	"	Ulysses F. Doubleday, Cayuga.
25th	"	Graham H. Chapin, Wayne.
26th	"	*Francis Granger*, of Ontario.
27th	"	Joshua Lee, of Yates.
28th	"	*Timothy Childs*, of Monroe.
29th	"	*George W. Lay*,* of Genesee.
30th	"	*Philo C. Fuller*,* of Livingston.
31st	"	*Abner Hazeltine*,* of Chautauque.
32d	"	*Thomas C. Love*, of Erie.
33d	"	*Gideon Hard*,* of Orleans.

[To fill vacancies in present Congress.]

3rd	"	John I. Morgan, Charles G. Ferris, New-York.

* Members of the present Congress.

SOUNDS.

The difficulty of transmitting sounds to a great distance arises from the sound spreading and losing itself in the surrounding air; so that if we could confine it on one side, as along a well—on two sides, as in a narrow street—or on all sides, as in a tube or pipe—we should be able to convey it to great distances. In the cast-iron water-pipe of Paris, which formed a continuous tube with only two bendings near its middle, the lowest whisper at one end was distinctly heard at the other, through a distance of 3,120 feet. A pistol fired at one end actually blew out a candle at the other end, and drove out light substances with great violence. Hence we see the operation of speaking tubes which pass from one part of a building to another, and of the new kind of bell which is formed of a wooden or tin tube, with a small piston at each end. By pushing in one piston, the air in the tube conveys the effect to the piston at the other end, which strikes against the bell—this piston being, as it were, the clapper on the outside of the bell. *Quarterly Review.*

GROSS DEBASEMENT.

A report lately published by a committee of gentlemen in London for collecting facts in relation to the subject of intemperance, discloses some of the most disgusting cases of *infatuated* devotion to liquor that ever came before the publick. One case is quite enough to show the character of the report. A woman now a widow, and the aunt of a most distinguished vocalist, having seen four sons and two daughters transported, agreed to sell the teeth of her head for the means of obtaining intoxicating drink, and had actually disposed of her whole stock in that commodity, until she had reduced the number to two. The last one she sold to a dentist in Long Acre for *four pence*, for the purpose of purchasing gin, and she then made up her mind not to dispose of the remaining two, as the pain and trouble was worth more than four pence. Deprived of this resource, she applied to a medical man to take her body after death, which speculation he would not enter into unless she would take a certain medicine so many times a week. This rather startled her, as she was apprehensive that the medicine was intended to put the Doctor the sooner in possession of his purchase, and she did not conclude the bargain.—*Courier.*

SAGACITY OF A CAT.

A few days since, a cat, in a family in this neighbourhood, who had not much experience in the feline wars, encountered an old rat, so sturdy as to defy all her efforts to despatch him by the ordinary process of biting and shaking, took him deliberately to a tub of water, plunged him in, and holding him with her fore foot, drowned him. The fact was witnessed by several of the family.—*New Haven Herald.*

It is the men of study and thought who in the long run govern the world. The greatest moral truths spring from their discoveries; it is their writings which render their truths fruitful, which popularize them, which make them penetrate the minds of the people at large, and impress upon them an indelible character of rectitude. The spirit of union among men of science is the certain presage of the union of nations.—*M. Arago.*

TO CORRESPONDENTS.

We shall always feel grateful for original or compiled communications on useful and entertaining subjects. There is no state in the Union which is not fertile in resources of the most interesting character; and there is hardly a town which is incapable of furnishing some *one* individual at least, who is competent to illustrate some fact which his experience has met, worthy of detail, as interesting and useful to readers and important to science. With such individuals, and especially those who do us the favour of sending pictorial illustrations of their subjects, we gladly cherish acquaintance. But we must inform "T. X." that we want no more political tirades; and "B. W." will unquestionably excuse us from such excruciating puling fustian as he sent us. His jingle reminds us of Tom Moore's couplet, in imitation of modern poetasters;

"Last night the wind blew down our well sweep,
To day, father and I put it up again—sheep."

ITEMS OF INTELLIGENCE.

Don Pedro died at Lisbon, in September last.

William Blackwood, Esq. the editor and publisher of the celebrated Blackwood's Magazine, is also recently dead.

Lexington, Ky. Oct. 31, 1834.

Extraordinary Incident.—A gentleman in the neighbourhood of this city, in riding across his farm a few days since, was suddenly surprised and alarmed to find his horse gradually sinking into the earth. He instantly leaped from the animal, and by so doing his own life was providentially saved. The horse continued to sink lower and lower into the earth, until he had descended one hundred and fifty feet. At this point, he became wedged between two masses of rock, and was crushed to death. The chasm or fissure, we are told, appears to have been formed, by the separation of the earth and rock in some convulsion of nature. The width of the fissure at the surface, we have not learned, but it was covered with a thin soil, which commenced giving way as soon as the weight of the gentleman and his horse was added to it.—*Intelligencer.*

Gold Coinage.—The amount of Gold coined at the mint since the passage of the new law is $2,489,900. Gold remaining uncoined Nov. 1st, $330,700.

Manufactories in Pittsburg.—The various manufacturing establishments of Pittsburg are thus briefly enumerated in a late number of the Gazette of that city.

There are in the city of Pittsburg, 16 Foundries and Engine Factories of the largest denomination, besides numerous other establishments of less magnitude.

There are 9 Rolling Mills, cutting 2 tons of Nails and rolling 8 tons of Iron per day, on the average, and employing from 70 to 90 hands each.

There are 6 Cotton Factories, with an aggregate of 20,000 spindles, 116 power looms, and 770 hands.

6 extensive White Lead Factories.
5 extensive Breweries, besides small ones.
6 Steam Saw Mills.
4 Steam Grist Mills.
10 extensive Glass Works.

Upwards of 100 steam engines in full operation.

There are, moreover, innumerable establishments for the manufacture of Ploughs, Timber, Wheels, Screws of all kinds, Saddle-Trees, Machine Cards, Bells, Brass works of every description, Locks, &c. &c.—all manufactured extensively for exportation.

Inquisition abolished in Spain.—This important event is announced in a late London Patriot, in the following decree, dated 15th July.

"Art. 1. The tribunal of the Inquisition is definitively suppressed."

"2. The property, income and other goods belonging to this institution are to be applied to the payment of the publick debt."

"3. The produce of the 101 canonships dependant upon the Inquisition, is to be applied to the same purpose."

"4. The *employees* attached to this tribunal and its dependancies, who possess ecclesiastical prebends or civil employments in remuneration, shall have no right to receive their emoluments from the funds of the said tribunal."

"5. All the other *employees* are to receive the amount of their salaries from the sinking fund, until they have been otherwise provided for."

We earnestly hope that the honourable example thus set by Spain will seal the doom of this cruel slavish institution, which had its origin in that country. *Priscillian*, a mild and eloquent man, was the first victim of religious intolerance under this system. *Turquemado*, the Inquisitor General, is said to have tried and tortured, in the course of fourteen years, eighty thousand persons, of which six thousand were executed!

Happy for America she has no established church, no state religion, and is therefore in no danger of ever countenancing any thing like force in favour of any particular sect. Every man is here left free to form and follow his own opinions, on the subject of religion, as well as on every other, and no one has a right to throw the least impediment in his way.

STANZAS BY Mr. R. H. WILDE.

My life is like the summer rose
  That opens to the morning sky,
But, ere the shades of evening close,
  Is scattered on the ground to die.
Yet on that rose's humble bed
The sweetest dews of night are shed,
As if she wept such waste to see;
But none shall weep a tear for me.

My life is like the *autumn* leaf
  That trembles in the moon's pale ray,
Its hold is frail, its date is brief,
  Restless, and soon to pass away.
Yet, ere that leaf shall fall and fade,
The parent tree shall mourn its shade,
The winds bewail the leafless tree,
But none shall breathe a sigh for me.

My life is like the prints which feet
  Have left on Tempe's desert strand,
Soon as the rising tide shall beat
  All trace will vanish from the sand.
Yet, as if grieving to efface
All vestige of the human race,
On that lone shore loud moans the sea·
But none, alas! shall *mourn* for me.

ANSWER BY A LADY OF BALTIMORE.

The dews of night may fall from heaven,
  Upon the withered *rose's* bed,
And tears of fond regret be given,
  To mourn the virtues of the dead:
Yet morning's sun the dews will dry,
And tears will fade from sorrow's eye,
Affection's pangs be lull'd to sleep,
And even love forget to *weep*.

The *tree* may mourn its fallen *leaf*,
  And autumn winds bewail its bloom,
And friends may heave the sigh of grief,
  O'er those who sleep within the tomb,
Yet soon will spring renew the flowers,
And time will bring more smiling hours;
In friendship's heart all grief will die,
And even love forget to *sigh*.

The *sea* may on the desert *shore*,
  Lament each *trace* it bears away;
The lonely heart its grief may pour
  O'er cherish'd friendship's fast decay
Yet when all trace is lost and gone,
The waves dance bright and gayly on:
Thus soon affection's bonds are torn,
And even love forgets to *mourn*.

A MOUNTAIN SCENE IN VIRGINIA.

'Tis glorious all—here nature spreads
Her verdant hills, her gentle meads,
And, lavish of her bounties still,
Adorns them well with lake and rill;
Relieves, with swelling heights the plain,
Then, gently, smooths them down again;
Or, with a bolder hand, uprears
The rock of many a thousand years,
Impending darkly o'er our head,
With aspect black, and coldly dead.

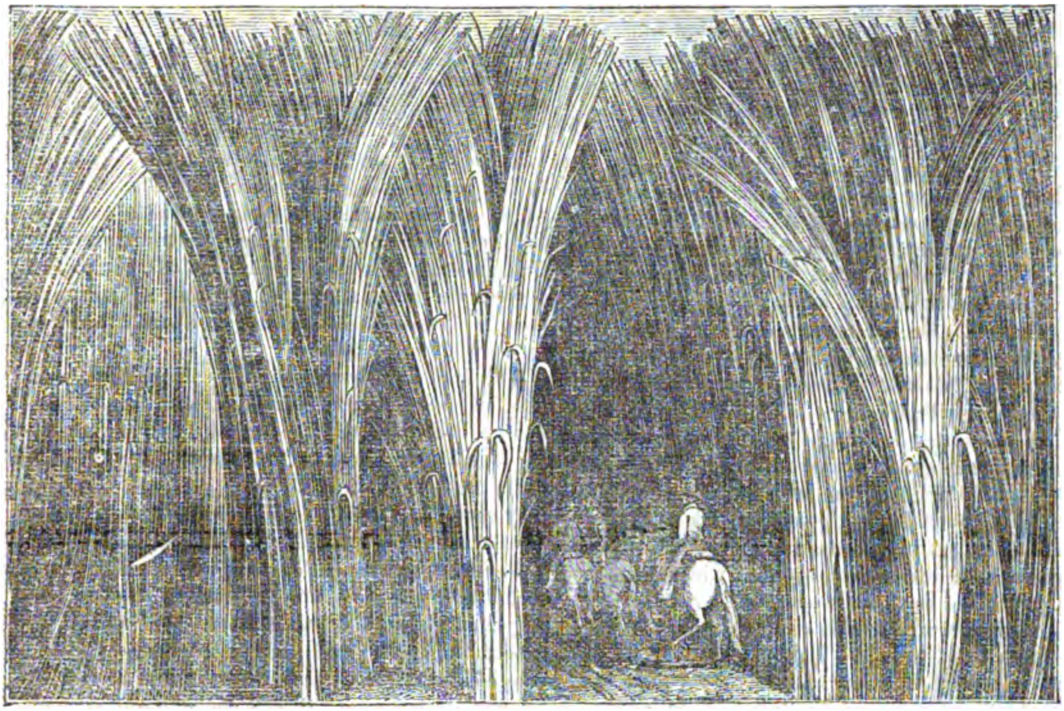
Here may the eye, with curbless ken,
Survey smooth valve and sudden glen,
And—with a spirit rivalling
Our own up-soaring eagle's wing—
Track the huge masses, that, on high,
Are props and pillars to the sky—
Clad in their azure robes, that seem
To shade the home of many a dream,
Where still the red man's fancy roves
For blessed airs and flowery groves.

Yet, with reluctant spirit, still
I scan soft vale and rugged hill—
Not half the rapture they impart,
Which else had wrought my weary heart,
Wert thou, thus far remote, but here
With me their wild delights to share—
To watch with me, and still partake
The dream their thousand shows awake—
Alas! the eye but halves its view,
Unless the heart goes with it too!—W. G. Simms.

SWEARING.

A Persian, humble servant of the sun,
Who, though devout, yet bigotry had none,
Hearing a lawyer, grave in his address,
With adjurations ev'ry word impress,
Suppos'd the man a bishop, or at least,
God's name so much upon his lips, a priest;
Bow'd at the close with all his graceful airs,
And begg'd an interest in his frequent pray'rs.—Cowper.

SECTION XXVII.



CANE BRAKES.

In nearly all the southern states and territories, and particularly in Louisiana and Texas, tracts of low and often marshy land are frequently met with, overgrown with the long and slender reeds which are used among us at the North as fishing rods. These tracts are called cane brakes. They sometimes grow in woods and forests as underbrush, and are as often found not intermingled with trees, but form a thick growth by themselves, almost impenetrable when the cane is dry and hard. The frequent passage of men and horses through some of them, keeps open a narrow path, not more than wide enough for two horses to go abreast conveniently, as represented above. These paths are often completely covered overhead by the reeds, which droop inward on account of the slenderness of their support and intermingle their tops directly over the path. The reeds grow about twenty feet high and upwards; and along some of these arched avenues the traveller proceeds, shut out from the view of the sky. Cane brakes not uncommonly occur of a league, and indeed of several leagues extent. In Texas, it is stated, there is one seventy miles in length, with scarcely a tree to be seen in the whole distance. The reeds serve as food for cattle and horses in winter, and are an invaluable and never failing resource when the prairies yield no grass. They are an annual plant, and are young and tender in the winter. When dry they are frequently burnt, to clear the land. Cane brakes are a great annoyance to hunters, affording a secure shelter to wolves and bears and other objects of pursuit, while to them, they are impenetrable.

The green colour in the leaves of plants is produced by the mixture of carbon, which is probably of a deep blue, with the cellular texture, which is of a whitish yellow. The carbon is obtained partly from the earth, partly from the air: but light is necessary for plants to decompose the carbonick gas, of which they retain the carbon only, without the oxygen: and therefore, plants growing in darkness are not green, but white or yellow; as those are which are earthed up, celery, endive, &c. This also accounts for the bending of plants towards the light.

HISTORY.

CANAAN.

The history of Canaan during the period we are considering, namely, from the year 1491 to 1004 before Christ, seems identified with that of the Jews. As the latter gradually took possession of their land soon after the year 1491 B. C. the curse of Noah, as contained in Gen. ix. 25, began to be realized. On the first approach of Moses to the borders of Canaan the Amalekites joined the inhabitants and repulsed him with great slaughter. About this time Sihon king of the Amorites, invaded the children of Moab and Ammon and dispossessed them mostly of their country. Arad was a king in the southeast of Canaan, who repulsed Moses at a second approach, but he was soon vanquished, and his country destroyed. Sihon soon after this rejecting the request of Moses for a free passage through his country, attacked the Israelites, but was himself totally overthrown. Og was another king among the inhabitants of Canaan, and the last of the race of giants. He had an iron bedstead nine cubits long. His kingdom, called Bashan, consisted of sixty walled towns, besides villages, and the country afforded an excellent breed of cattle, and fine oak timber. He fell in battle, as he was espousing the cause of Sihon, and attempting to stop the progress of Moses, and his whole kingdom was transferred to the Israelites. Jericho was the first point of attack by the Jews under Joshua, who overcame it by a miracle, and destroyed all the inhabitants but one woman and her family who had been instrumental in saving the spies that had been sent into this city by Joshua; a curse was pronounced upon the man that should ever attempt to rebuild it. Joshua also took a little state called Ai, by stratagem. The king of Ai, who had received an accession to his forces from Bethel, seeing Joshua before his walls with a formidable force resolved to engage him; which he no sooner offered to do than the Israelites faced about and fled, and he ordered every man out of the city to pursue the enemy that feigned only to run before him. The Israelites lying in ambush seized upon the defenceless city and set it on fire. Ai's army was intercepted and destroyed to the number of 12,000, and Ai himself was taken and hung. The Gibeonites escaped the common fate by deceiving their enemies, the Jews, into an alliance, pretending they came from a distant country. Joshua spared them their lives, but when he discovered the deceit, he condemned them to slavery. Five kings leagued together, and placed Adonibezek king of Jerusalem, at the head of their forces to stop the progress of Joshua. But the latter general compelled the confederate kings to retire with the utmost precipitation, and in their retreat, a tempest of hail stones fell of such enormous size that they did more execution than the sword of Joshua. Joshua is said to have prolonged the day. or as it is expressed, commanded the sun to stand still, to complete their defeat; he overtook these kings and hung them at the entrance of a cave where they had taken refuge. Jabin, king of Hazor, hearing of the discomfiture of so many chiefs of the nation, collected together all the tribes of the Canaanites, and endeavoured to withstand the destruction which alike threatened them all. Jobab the king of Madon, and the king of Shimron, of Achshaph, the kings on the north of the mountains, and those in the plains south of Cinneroth, and in the valley, and on the borders of the Dor on the west, the Amorite, the Hittite, the Perizzite, the Jebusite and the Hivite, and the Canaanites generally, all confederated together against Israel.

This army, according to Josephus, l. 5. c. 1. consisted of 300,000 foot, 10,000 horse, and 20,000 armed chariots. They encamped at Beroth, a city of the upper Galilee, near the waters of Merom. Here, Joshua having marched 60 miles in five days, came upon them by surprise, and completely routed them; and Josephus says, "such a number was slain as could not be believed by those that heard it." The Anakims, whom we have heretofore spoken of as a fierce and barbarous race inhabiting some of the mountains of Canaan, were also invaded and cut off; and thus by degrees the greatest part of the land of Canaan fell into the hands of the Israelites to whom it had been "promised" years before.

The land of Canaan was then divided by Joshua into lots, for the accommodation of the tribes of Israel. After this division, the Canaanites that were left, having remained unmolested for about twenty years, were again hunted out and slain by thousands wherever they could be found. Adonibezek, who had caused the thumbs and great toes of seventy Canaanite kings to be cut off, and compelled them to eat meat under his table like dogs, was himself taken by the Jews and subjected to the same punishment. Sisera, who had expected to crush Israel under the wheels of his chariots of Iron, of which according to some, he had nine hundred in his army, though the authority is doubtful, was put to flight, and perished by the hand of a woman, who drove a nail into his temples. With Sisera and Jabin, perished the hopes of the unfortunate Canaanites. Driven from every quarter by the invading Israelites, and subjected to slavery when overtaken, they had no peace either in flight or submission. To complete their misfortunes they were attacked in Gezer, one of their last resorts, by Pharaoh; and doubtless without the least provocation. That city was burnt and the inhabitants murdered. Thus opposed by the Israelites on the one hand, and the power of Egypt on the other, the remnants of the Amorites, Hittites, Perizzites, Hivites and Jebusites were scattered and destroyed. Some were buried under the ruins of their cities, which others had abandoned filled with rage and indignation. Some travelled into Africa, and settled there, erecting a monument in memory of the calamities which had driven them from their native place. In their way thither they are supposed to have seized on lower Egypt, where they erected monarchies, which has induced some to think them the Phœnician pastors who lorded it so long over Egypt. They were at last driven farther westward into Africa.

Others of the Canaanites formed settlements on the sea coast, where commerce and their improvements in navigation and the useful arts rendered them celebrated by the name of Phœnicians. A small part of them remained, by the permission of their conquerors, in the country which was formerly theirs.

"No country," says Anquetil, "was ever subjected to so many successive divisions as the land of Canaan. Under its first inhabitants it contained kingdoms; under the Jews, tribes; under the Babylonian conquerors and others, provinces; under the Idumean kings, tetrarchies* and toparchies,† subject to the Romans; under the Mamelukes, scattered cities without any connexion in their government; under the Crusaders, one kingdom; and lastly, under the Turks, if we except some maritime districts, it is almost uninhabited. It must be confessed the country of Canaan would have nothing remarkable, if it had not been the habitation of a people who placed their happiness in its possession, and who never speak of it but with transport; if it had not been the scene of the principal mysteries of our religion: and lastly, if Christian Europe by pouring forth its troops, at the time of the crusades, on this small part of Asia, had not rendered it famous. Its limits, and consequently its extent, have varied in different ages; and few of its parts have preserved their primitive names. As the tribe of Judah was the most numerous and warlike, the subdued nations were accustomed to call their conquerours Jews, and their country Judea."

PALESTINA.

This country was not celebrated during this period, for any thing more than the advantages which the Philistines its inhabitants, frequently gained over the Israelites. These two nations were continually at war with each other. Samson was raised up to contend against the formidable Philistines. Gifted with more than ordinary human strength, he killed thousands of their youth, took Ascalon, carried away the gates of Gaza on his shoulders, and burnt their harvests. When made prisoner by them he soon after shook down a temple, and buried great numbers of the Philistines together with himself, in the ruins. Among the successes of the Philistines over the Israelites they took the ark of the covenant from them and all their arms, and all the means of manufacturing any, not even suffering a smith to remain among them. But David, who killed the giant Goliah with a stone from his sling, afterwards led on the Israelites to many glorious victories over the Philistines in return. "The Philistines afterwards regained their superiority in a great battle, in which Saul was killed. David revenged the defeat of the Israelites; and other kings of Israel subjected them to their yoke, which, however, they soon shook off, and were never entirely subdued. At length, as if the destinies of these two people were continually to balance each other, after having mutually exhausted their strength, they passed together under the dominion of the Assyrians, and the nation of the Philistines was lost."

NATURAL HISTORY.

AMERICAN MONKEYS.

The most distinguished of the American monkeys are the Sapajous. They are comprised under the scientifick term Ateles, a genus formed by M. Geoffroy St. Hilaire, and presenting numerous and remarkable modifications of organick structure, which readily distinguish them from all other groups of quadrumanes. The most prominent characters of the genus consist in their long, attenuated, and powerfully prehensile tails; fore-hands either entirely deprived of thumbs, or having only a very small rudiment of that organ; and their dental system, which, like that of all the American quadrumanes, consists of two molar teeth in each jaw, one on each side, more than are found either in man, or in the kindred genera of the old world. The first and last of these modifications are common to the ateles and other American genera; the second is shared with them only by the *colobi*, a small African genus, consisting only of two species, neither of which has been observed by any zoologist since the days of Pennant, and with whose other characters we are very imperfectly acquainted. The ateles are further distinguished by their small round heads, corpulent bodies, and remarkably long slender limbs, which characteristicks giving these animals much of the general appearance of a spider, have procured for them the appellation of *spider-monkeys*, by which they are commonly known. Like all the other quadrumanes of the new world, they are destitute of cheek pouches and callosities, characters which approximate them in some measure to the real apes. The skull of the ateles is rounder and the brain larger than in the common monkeys; the forehead also is more elevated, and the muzzle less prominent. The eyes are widely separated from one another by the base of the nose; the nostrils open laterally, and are separated by a thick cartilaginous partition; the ear only differs from that of man in having no inferiour lobe; the mouth is small; the lips thin and extensible; and the hair generally long, coarse, and of a glossy appearance.

But the organs of locomotion chiefly distinguish the ateles. The anteriour extremities, in particular, are by their length and the slenderness of their form out of all proportion with the other parts; they are in general, as above observed, destitute of thumbs; or if some species are provided with this organ, it is only in a rudimentary form, and consists merely of a flat nail, or at most of a single joint. On the posteriour extremities, on the contrary, the thumb is largely developed, placed far back towards the heel, and is completely opposable to the fingers. But these animals possess, in their long and muscular tail, an organ of prehension much more powerful than the other extremities; it executes, in fact, all the functions of a fifth limb, though probably on account of its distance from the seat of sensation, it is not endowed with a very delicate sense of touch. For six or seven inches from the point it is naked and callous on the under surface; and it is by this portion that the animal hangs suspended from the branches, or swings itself from tree to tree with an ease and velocity almost incredible.

Their entire organization is adapted exclusively to an arboreal life; on the earth nothing can be more awkward and embarrassed than their motions. They trail themselves along with a slow and vacillating gait, sometimes using their long fore-arms as crutches, and resting upon their half-closed fists whilst they project the body and hind-legs forward; at other times walking in a crouching position on the hind legs only, balanced by the long arms and tail, which are elevated in front and rear respectively, and always ready to take advantage of any object by which to avail themselves of their natural powers of progression. But in proportion to their embarrassment on a plain surface is their dexterity and agility among the trees of their native forests. Here they live in numerous troops, mutually support one another in danger, beat and expel the less favourably organized *sakis* from the vicinity of their cantonments, and exercise a perfect tyranny over all the other arboreal mammals of their neighbourhood. Though leaves and wild fruits compose the principal part of their food, yet they do not reject flesh, but hunt after insects and the eggs and young of birds, and are even said to adopt the stratagem of fishing for crabs with their long tails. They are exceedingly intelligent, easily domesticated, and soon become strongly attached to those who treat them kindly: they exhibit none of the petulance and insatiable curiosity of the common monkeys; their character, on the contrary, is grave, and approaches even to melancholy; but if their passions are less violent, and more difficult to excite, their affections are infinitely stronger; and if they are without the amusing tricks of the monkeys, so likewise are they without their fickleness and mischief.

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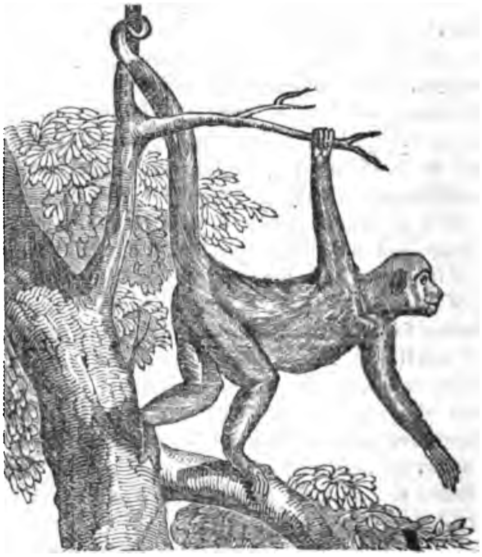
* A Tetrarchy is the government of the fourth part of a province.

† A Toparchy is the government of a particular region, as a county, city, town, &c.

Dampier relates, that when a troop of ateles have occasion to pass any of the larger rivers of South America, they select a situation in which the trees are highest and project farthest over the stream; then mounting to the topmost branches, they form a long chain by grasping one another's tails successively. This chain being allowed to hang freely at the lower end, whilst it is suspended from the top, is put in motion, and successively swung backwards and forwards till it acquires an impetus sufficient to carry it over to the opposite bank. When this is accomplished, the animal at the lower end catches the first branch which comes within his reach, and mounts to the highest, where, as soon as he is firmly attached, the other end of the chain is permitted to swing, and thus the whole troop are passed over. The ateles, as well indeed as all the other American quadrumanes,, are esteemed as an article of food by the native Indians; and even Europeans, whom curiosity or necessity has induced to taste it, report their flesh to be white, juicy, and agreeable. The only thing disgusting about it is a strong resemblance which the whole body, and particularly the head and hands, bear to those of a young infant. Nor is it without being strongly disposed to question the nature of the act, that European sportsmen, unaccustomed to shooting monkeys, witness for the first time the dying struggles of these animals. Without uttering a complaint, they silently watch the blood as it flows from the wound, from time to time turning their eyes upon the sportsman with an expression of reproach which cannot be misinterpreted: some travellers even go so far as to assert that the companions of the wounded individual will not only assist him to climb beyond the reach of further danger, but will even chew leaves and apply them to the wound for the purpose of stopping the hemorrhage. The following species of ateles have been distinguished and characterized by naturalists and travellers:

1. The *Quata* (*A. paniscus*, Geoff) or, as the French write it, *coaita*, is a large species, covered with long coarse hair. of a glossy black colour; the belly is protuberant, the head small and round, the limbs long and slender, the fore-hands entirely deprived of thumbs, the tail robust and powerful, the eyes and cheeks deeply sunk, and the face copper colour. On the back and outsides of the limbs the hair is very long and thick, but the belly and inner parts are nearly naked. The hair of the head is directed downwards, and the ears, concealed beneath it, differ from those of the human species only in having no inferiour lobe. This species is very common in the woods of Surinam and Brazil. It is active and intelligent, and unites considerable prudence and penetration to great gentleness of disposition. They go in large companies, and when they meet with a man or any animal which is strange to them, come down to the lower branches of the trees to examine them, and having satisfied their curiosity, begin to pelt them with sticks, and endeavour to frighten them away. They cannot leap, but exhibit the most surprising agility in swinging from tree to tree. Acosta, in his *History of the West Indies*, relates the following anecdote of a quata which belonged to the Governour of Carthagena:—'They sent him,' says he, 'to the tavern for wine, putting the pot in one hand and the money in the other; they could not possibly get the money out of his hand before his pot was full of wine. If any children met him in the street, and threw stones at him, he would set his pot down and cast stones against the children, till he had assured his way, then would he return to carry home his pot. And what is more, although he was a good bibber of wine, yet he would never touch it till leave was given him.'



[THE QUATA. Ateles paniscus.]

2. The *Chuva* (*A. marginatus*, Geoff.) closely resembles the quata in physiognomy, size, and proportions; the quality and colour of the hair are also the same in both, except that the face of the chuva is surrounded with a rim of white, which, on the forehead particularly, is broad, and directed upwards, so as to encounter the hair of the occiput, and form a low crest on the top of the head. The hair of the fore-arm is directed partially towards the elbow; like that of the body it is long and coarse, and though perfectly black, has not the glossy appearance of the quata's covering. The face is nearly naked, and tan-coloured; the palms of the hands, soles of the feet, and callous part of the tail are violet black, and the whole skin beneath the hair appears to be of the same hue. According to Humboldt, who discovered the species on the banks of the Amazon, the male and female differ in the colour of the circle which surrounds the face, and which he describes as yellow in the former and white in the latter. A young male examined by M. Geoffroy St. Hilaire, did not present this difference; but, as in many other instances, it is probable that the young males of this species have at first the colours of the female, and that it is only on attaining their adult state that they assume those marks which distinguish their sex. It appears also that individuals differ considerably in the extent as well as the colour of this circle. The specimens described by MM. Humboldt and Geoffroy had it entirely surrounding the face; that examined by M. F. Cuvier, had only the hair of the cheeks and the forehead white; and, finally, there is at present a female in the gardens of the Zoological Society of Lon-

don, in which the latter part alone differs in colour from the rest of the head. In this individual the hair of the forehead is much shorter and more thinly scattered than on other parts: it covers the whole extent of the forehead, is turned upwards, and is of a silvery gray colour, whilst that of the surrounding parts is deep black. The disposition and manners differ in no respect from those of the quata.

3. The *Cayou* (*A. ater*, F. Cuv.) is considered by MM. Geoffroy and Desmarest as a variety of the quata; but M. F. Cuvier, from observations made upon the living animal, has recognised and described it as a distinct species. It must however be confessed, that it approaches so nearly to the quata as to render further observations necessary to determine the question of their specifick difference. The size, form and colour are the same in both, and the only marked distinction reported by M. Cuvier consists in the colour of the face, which is black in the cayou and copper-coloured in the quata. 'The hair,' says M. Cuvier, 'is long, and of a harsh silky quality. It is rather shorter on the head and tail than on the rest of the body, where it falls backwards in the ordinary way, but on the head it is directed forward, and falls over the face.'

[THE MARIMONDA. Ateles Belzebub.]

4. The *Marimonda*, (*A. Belzebub*, Geoff.) has the top of the head, the back, sides, and external surface of the extremities black, and all the under parts, the cheeks, throat, breast, belly, inside of the limbs, and under surface of the tail for its first half, white with a slight shade of yellow. The naked parts are violet black, except immediately about the eyes, which are surrounded by a flesh-coloured circle. This species, according to Humboldt, replaces the common quata in Spanish Guayana, where it is extremely common, and is eaten by the Indians. 'It is,' says this celebrated traveller, 'an animal very slow in its movements, and of a gentle, melancholy, and timid character; if it occasionally bites, it does so only in its fits of terrour. The marimondas unite in great companies, and form the most grotesque groups. All their attitudes announce the extremity of sloth. I have frequently seen them, when exposed to the heat of a tropical sun, throw their heads backwards, turn their eyes upwards, bend their arms over their backs, and remain motionless in this extraordinary position for many hours together.' The young of this species appear to have the upper parts of the body mixed slightly with gray, but this mixture gradually disappears as it grows towards maturity, till the adult animal presents the uniform black above and white below, as already described.

5. The *A. melanochier* (Geoff.) of which we are unacquainted with the native Indian name, is also a distinct species. The head, members, and tail are black, or dark brown, on the superiour surface; the internal face of the arms and fore-arms as far as the wrists, and of the thighs and legs, the under surface of the tail, the throat, breast, belly, and sides of the hips, are white or silvery gray; the shoulders are yellowish gray, and the remainder of the upper parts of the body, as well as the whiskers, are pure gray; the fore-hands and the naked part of the tail are black, as are also the face, the cheeks, and the under half of the nose; but round the mouth and eyes is flesh coloured. The hair is uniformly of a silky quality; that on the black and white parts is of the same colour throughout, but on the gray parts it is annulated with alternate rings of black and white. This species, as well as all those hitherto described, is entirely deprived of the fore thumb, and does not even exhibit a rudiment of that organ. Only a single individual has been observed alive; its manners are the same as those of the ateles in general, but its habitat has not been definitely determined. A specimen preserved in the Museum of the Jardin des Plantes presents a distribution of colours which differs in some degree from what is here described; but it is not improbable that the difference arises in a great measure from the fading which naturally takes place in the colours of skins which have been long mounted and exposed to the action of the atmosphere, if indeed it be more than an accidental or individual distinction.

6. The *A. Arachnoides*, or Brown Quata, as it is called by Baron Cuvier, partakes, in fact, very much of the characters and appearance of the common quata, from which it is principally distinguished by its uniform reddish brown colour. This species, when full grown, measures rather better than two feet in length; the tail is about a couple of inches longer than the body; the fore legs are one foot nine inches long, the hind legs one foot eight, and the hand six inches. The hair is short, fine, and soft, and that of the forehead is directed backwards, contrary to what is usually observed in the other ateles; the back and upper parts of the body, are, generally speaking, well furnished, but the breast, belly, and groins are nearly naked, or at least but sparingly covered with scattered hairs, of a longer and coarser quality than those on other parts; the root of the tail is rather thick and bushy, but it is gradually attenuated towards the point, and, for the last ten inches, naked underneath. The general colour is uniform chestnut-brown, the first of these colours becoming clearer and more intense upon the head, and more especially round the eyes: the forehead is bordered by a circle of stiff coarse black hairs, beneath which a semicircle of light silvery gray passes over the eyes, in the form of brows, and becomes gradually more and more obscure, till it is finally lost in the uniform reddish brown of the temples. The face is naked and flesh-coloured, the under parts of the body of a silvery gray slightly tinged with yellow, with the exception of the abdomen, which, as well as the inner surface of the thighs, and the naked stripe underneath the tail, are of a bright red colour. The manners and habits of this species are unknown in its native forests: those which have been observed in a state of confinement exhibited all the gentleness and listless apathy of character which distinguish the ateles from the common monkeys of South America, as eminently as they do the gibbons of the Indian isles from the other quadrumanes of the Old World. Except in the total want of the thumb on the anteriour extremities, the *A. Arachnoides* approaches very nearly to the following species, and appears, indeed, to be intermediate between it and the common quata.

7. The Mono, or Miriki (*A. hypoxanthus*, Kuhl) in habits the forests in the interiour of Brazil, and, as has just been observed, approaches very nearly to the *A*

Arachnoides, as well in the colour of its fur as in the general form and proportions of its body and members; but it is readily distinguished from that species as well as from all the other ateles hitherto described, by the presence of a small rudimentary thumb on the fore-hands. The face also is more uniformly covered with hair than in the generality of the other species, being naked only about the region of the eyes; the hairs which compose the eyebrows are long, black, and directed upwards; the cheeks, lips, nose, and a narrow line descending from the forehead, are covered with short hairs of a pale yellowish-white colour; the chin also is furnished with short hair of the same colour and quality, but intermixed with thinly scattered long black hairs, forming a species of beard, and extending over the upper lip in the form of thin mustaches. The ears are small and nearly concealed by the hair of the head, which though not very long, is thickly furnished, and of a pale gray colour slightly tinged with yellow. The whole body and members are of a uniform grayish fawn colour, only differing in the greater degree of intensity which distinguishes the back and upper parts from those beneath, and in the lighter gray tinge which predominates on the extremities. The backs of the fingers are hairy down to the very nails, and there is a rudiment of a thumb on the fore feet, covered with a short compressed nail.

[THE MONO. Ateles Hypoxanthus.]

The mono was discovered by Prince Maximilian of Neuwied, during his travels in Brazil. It is the largest species of the quadrumanes which inhabit the part of the country through which that scientifick traveller passed, and though sufficiently common in particular districts, appears to have upon the whole but a very limited geographical range. Its hide is said to be more impervious to moisture than any other description of fur known in that part of the world, and for this reason the Brazilian sportsmen have cases of the skin of the mono made to protect the locks of their guns from the rain.

8. The Chameck (*A. subpentadactylus*, Geoffroy,) the last species of the genus distinctly known at present, resembles the mono in having a small rudimentary thumb on the anteriour extremities, but it is without a nail, and in other respects the two animals are sufficiently distinguished by their difference of colour and habitat. The chameck indeed approaches more nearly in external form and appearance to the quata than to any other of its congeners, being furnished with a similar coat of long dense hair, of an intense and uniform black colour; but it may be readily distinguished from that species by the presence of the rudimentary thumb on the anteriour members, as well as by its size, which considerably exceeds that of the quata. It has a protuberant muzzle, and its lips, like those of the quata, are capable of prolongation; the forehead is high; the face, cheeks, ears, and chin, are naked and of a brown colour, with a few long black hairs thinly scattered over them; the hair of the head is long, matted, and directed forwards over the forehead, that of the body and members very long and thick; the fingers, both upon the anteriour and posteriour extremities, are long, slender, and nearly naked; the tail is considerably longer than the body, very thick and covered at the base with close shaggy hair, but attenuated towards the point, where it is more sparingly furnished with shorter hair, and entirely naked underneath.

This species inhabits Guyana and some of the neighbouring provinces of Brazil. Von Sack, in his *Voyage to Surinam*, gives the following account of its manners under the name of quata, with which species its general appearance probably causes it to be frequently confounded. 'The quata,' says this author, 'is of a very docile disposition, and capable of being quite domesticated: I have seen a pair of them at a gentleman's house at Paramaribo, which were left quite at liberty; when the female negroes were employed at their needlework, they used to come and sit amongst them, and play with a piece of paper, and afterwards go out to gambol upon the trees, but never went over to the neighbouring gardens; and they knew well the usual hour of dinner at their master's, when they would come to the gallery, look in at the windows, though without attempting to enter into the room, being aware that this was a liberty not allowed them; they therefore patiently waited for their dinner on the outside.'

TEXAS.

Under the Spanish dominion, Texas was a separate province, occupied by three military posts, La Bahia, St. Antonio de Bexar, and Nacogdoches: and settlements of Mexicans were formed around each, which grew into a considerable town at Bexar, of about 3000, and at Nacogdoches and La Bahia into villages of about 500 and 300 inhabitants. This number has not increased, and forms at present nearly the amount of the Mexican and Spanish population in Texas; an addition of 1000 would include the whole.

The country at large, in all its beauty and fertility, was left unoccupied, except by the wild horse, the deer and the buffalo; all of which, amidst luxuriant natural pastures, have multiplied to an extent almost incredible. An intelligent trader among the Indians in the interiour regions of that country, upon being asked, how many buffaloes he had seen in one herd? replied, one million—meaning literally what he said: but it may be restricted to a declaration, that they could not be counted. The deer are still more numerous, and that noble animal, the horse, roves the country in gregarious masses, with all the pride and majesty of his ancestors. The progress of population has not diminished the number of either, but only limited their range.

Texas was but little known to our countrymen, until seen by the gallant bands who entered it, in aid of the patriot cause at different periods of the Mexican struggle for independence. They saw a country equal to

France in extent, intersected with numerous rivers running hundreds of miles into the interiour, producing in its various climate and soil, all the commercial staples of the whole American continent. They brought home this knowledge, and gave an account of its beauty, fertility and salubrity; and many were tempted to seek an abode there, in spite of the prohibition of the then existing laws.

Foremost in this enterprise was Moses Austin, who, about twelve years since, obtained from the Commandant at Bexar, permission to introduce settlers, repaired to the United States to procure them; but dying on the route, left his son, Col. Stephen F. Austin, with the fulfilment of his undertaking. On this gentleman's arrival at Bexar, he found the commandant indisposed to comply with his engagements; and the revolution being accomplished, and a new order of things established, he determined to proceed to the city of Mexico, and there renew the proposal of introducing settlers into Texas. The result was the passage of a general colonization law, authorizing districts of country to be assigned to contractors who would undertake to populate the country. This law laid the foundation of a system which was made more liberal and extended by that of the State of Coahulia and Texas; under which were made the grants which have been the subject of so much enterprise.

Austin was the first to begin colonizing, and laid the foundation of the extensive settlements now existing in Texas. But others soon followed; and Zavala, Burnet and Vehleim were equally successful in their application for lands. They selected the district of country immediately on the boundary line of the United States, lying between the Sabine to the East, the Jacinto and Naveste to the West, and the Gulf of Mexico on the South, running North about 300 miles. Austin's settlement is contiguous, and lies on the western line of Vehleim & Burnet's, and embraces the rivers Brassos and Colorado. Grants have been made to others in different sections of the country more remote from our borders, and all of good land. But the settlements from the Sabine to the Colorado, being continued and nearer to us, are better known, and can be described with more certainty.

Texas in general is a prairie country, having all the streams skirted by timber. This is more particularly its character after passing the Trinity, and as you advance to the northwest the prairies are of vast extent. But in the grants of Zavala, Burnet & Vehleim there is less of prairie and more of woodland. They abound in beautiful natural meadows, of dimensions from one to five hundred and a thousand acres, producing a luxuriant herbage at all seasons, but have a large proportion of woodland without undergrowth, affording fine pasturage and presenting the aspect of splendid lawns and parks prepared with the taste and labour of high cultivation.

On some of the rivers, the Brassos for instance, are dense forests, but they are never found on the highlands.

The mildness of the climate is such, that no provision is made for horses, cattle, hogs, nor for any stock on a farm: Nature's ample store is sufficient throughout the year, and at all seasons they fatten in the natural pastures; of course they multiply rapidly, and Texas may be called the paradise of animals of the inferiour order; and to man it is the land of promise.

That useful plant, the Indian Corn, grows throughout in perfect majesty, almost scorning the aid of the hand of man. From the gulf to an average distance of 70 miles, the country is level, and forms the sugar district. At this point about the latitude of 30 degrees, the surface becomes undulating, and wheat, rye and oats, can be raised; and one degree further north produces abundant harvests. Cotton is cultivated from the gulf to the Red river, and yields largely with a staple uniformly good; and near the gulf, in length and fineness of staple, approaches the Sea Island Cotton. This is the great crop of Texas, and even at this period equals 10,000 bales. Sugar has for many years been made on the Trinity, within Vehleim's grant, and the cane ripens several inches higher, than in Louisiana. Tobacco grows luxuriantly every where, and may become an important article of export. The grape is universal throughout the country, and in great variety and sweetness. In Vehleim's grant an attempt has been made to cultivate the native vines, and the experiment has shown that wine of the best quality can be made from them, and we may promise ourselves at a future day to have American wines from this country rivalling those of Europe.

A country so inviting is of course rapidly settling, and it is estimated to have at this time a population of 3,000 Anglo-Americans. The law of the 6th April 1830, which prohibited the citizens of the U. S. from entering the country as colonists being repealed, they are now going in and receiving titles to the finest lands in the world, at prices so low as to enable the poorest to acquire a large farm. And a further inducement to emigrate to this delightful region is held out by the law now in operation forming Texas into a separate Judicial District, with a Judge of ability, a native of the United States; and an organization of courts similar to our own. The proceedings are required to be in the English language, and the right of trial by Jury secured in all cases civil or criminal. By another law it is declared that no man shall be molested on account of his religious or political opinions; thereby securing the rights of conscience and religious freedom. These two liberal laws were passed at the last session of the State legislature, and the first by the federal Congress, and approved by President St. Anna; showing fully the friendly feelings entertained towards Texas by the State and national authorities.

All is now quiet throughout the republick. Texas is never affected by the political changes and commotions in Mexico. The agitated wave is calmed before it reaches a shore so distant from the places where the storms arise. The disturbances which took place two years ago from outrages committed by the military have all subsided, and quiet long since restored. At present there is not a Mexican soldier in Texas, and it is more than probable that none will ever be sent there; certainly not beyond what may be necessary to protect the revenue.

The population of Texas is remarkably good for a border country. You cannot expect to find there the refinement and courtesy of older communities; but the virtue of hospitality is nowhere more manifest. Those who imagine that Texas is without the higher requisites for social intercourse are greatly mistaken. From the Sabine to the Colorado, and from the Nacogdoches road to the gulf, embracing the colonies of Austin, and those of Zavala and Vehleim, good farms are opened, comfortable houses erected, many of them large and commodious, and inhabited by as intelligent and respectable families as any country can afford. Many villages have sprung up, exhibiting a growing commerce with its universal attendants, refinement and luxury. But this early and rapid advancement of Texas will not seem strange when we reflect that 3000 Americans are there occupying a fertile soil under a genial climate, and with their accustomed energy and enterprise are developing the resources of one of nature's favoured regions.

It may be well to add, that the mode of acquiring lands in the different colonies is simple, and the titles made secure and in fee. The assignment of lands has been to persons called Empresarios (contractors) who stipulate to introduce a certain number of families within a given time, and no person can within this period acquire lands in the district of the Empresario without his consent. This consent is obtained by a certificate stating the family received and the quantity of land allowed them, which is presented to a commissioner appointed by the Government for making titles, who immediately orders a survey, and upon its return, makes a deed to the settler and the title passes direct from the state to him. The law allows a married man to have not exceeding a Sitio, equal to 4428 English acres; and a single man with one fourth that quantity, with a privilege of extending it to a Sitio when he gets married; and a foreigner marrying a Mexican woman is entitled to one third more. On receiving the deed from the Commissioner the colonist takes an oath to support the constitution and laws of the country, by which two acts he becomes a citizen. There is no tax on land nor on any other property, and the emigrants are allowed to introduce all articles for their own use free of duty.

New-York American.

PARENTAL EDUCATION.

Parents are the natural guardians of their children. To you is committed the protection and education of those whom God has given you; and you will be accountable for the faithfulness or unfaithfulness in which you perform this duty. You have strong obligations and high duties to society, to your country, and to your friends: but much stronger, and infinitely higher ones to yourselves, to your children, and your Creator. Every man and woman has the care of his or her own heart and ways, and the hearts and ways of those who are helpless and ignorant, but yet committed to their trust. Parents may receive liberty and protection from government—they may receive comforts and enjoyments from society,—but from these sources they can receive but little aid in the primal education of their children. This is a work which belongs to them exclusively. To parents is entrusted the infant mind when it begins its immortal career.

But, from the *supposed* insensibility and incapacity of the child, during the three or four first years of its existence, parents often neglect the education, or the formation of the character, at that early but susceptible age. Many parents seem not to observe, that the infant commences acting and *learning* from the first moment of its existence. They see not that every look from its mother, every notice from its father, every animate and inanimate object which gets its attention, every sound and tone of voice, and family circumstance, are forming a character in the child, making impressions which will control and endure, and giving some kind of an education, either good or bad, which will influence the after-life.

Parents who do nor perceive the wakeful attention and deep susceptibilities of early childhood, are not careful how they order their own conduct before their offspring, nor are they guarded in their expressions,—and thus insensibly form a character which all their after-instruction and good example will never change. Parents should know the capacities of their children,—ascertain what passion, or propensity is acquiring undue strength, and how far the child is capable of receiving wholesome restraint and moral instruction. They should see that circumstances, apparently fortuitous, often have great influence; if not carefully observed and diligently counteracted, they will give to the early character a strong bias, which will be unhappy in its tendency.

The mother has the whole education of her children till they are three or four years old. During this time she may stamp a character which will remain through life. She may so moderate the passions, restrict the appetites, correct the desires, and obtain such a government over the child's mind and affections, as to form the most decided character. After the child commences going to school, much of its time is still spent with its parents. The duties of parents are relieved by the teacher but a short time. The watchfulness and care of the parent at this period, when the child is meeting with new companions, new modes of government, and an increased number of objects, which are exerting a strong influence, should be greater than before. Even if the privilege of a school be enjoyed, the education of the children belongs, in a great degree, to the parent. By the parent, it must be commenced, carried forward, and completed.

Parents leave the education of their children too much with the schoolmaster. You appear to think, that providing your offspring with food and clothing is all that is required of you: the education, the formation of the character, you say, belongs to the teacher. This cannot be so. Your example, companions, opinions, and expressions, will all unite with the teacher's instructions. You should, instead of trusting all to the teacher, co-operate with him, unite your labours with his, and ascertain the influence of the teacher and the influence of the school upon the child. Do not speak unfavourably of the teacher before your children, but teach them to love the instructer and the school-room, and at all times to be obedient. If your children are under good government at home, it will greatly aid the teacher in managing them at school; but, if the government at home is bad, it will be difficult for the instructer to control their conduct, or establish any government over them during their school hours. You often complain of the defective government of the teacher, yet do not perceive that the children are under no restraint at home. You, perhaps, have indulged them in every whim and desire; subdued but few of their vicious inclinations; suffered them to grow up disobedient and inattentive; and now, how can you expect the teacher to bring them under an orderly, respectful behaviour at school? Do not find fault with the teacher, till you have examined your own government, and ascertained how far *you* have fitted them for obeying or disobeying others.

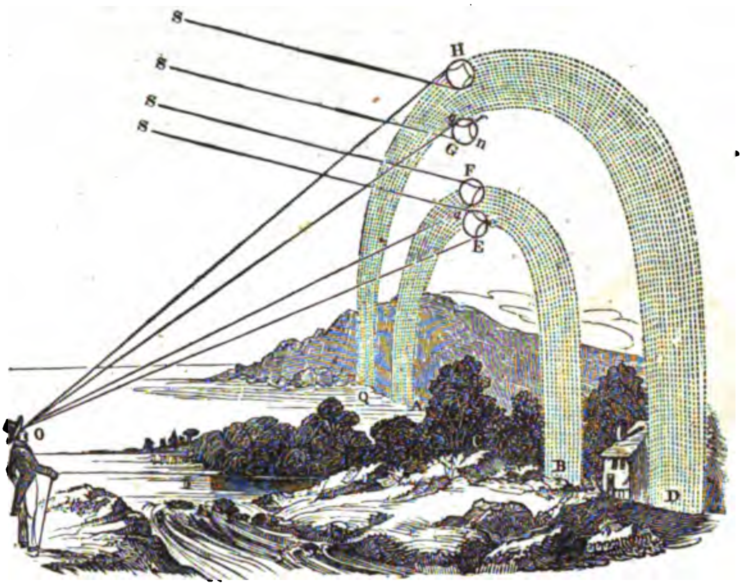
Dist. School.

ASTRONOMY.

THE RAINBOW, OR IRIS.

Nature, in all the varied aspects of her beauty, exhibits nothing more attractive than this phenomenon.

Among the Hebrews this appearance was denoted by a word, which signifies the "Bow of God;" and among the Greeks, by one signifying "Daughter of Wonder." It never takes place but when a cloud, opposed to the shining sun, dissolves in rain, from which it follows that to observe this spectacle the back of the spectator must be turned towards the sun. Frequently there are two bows or arches; an inner one, in which the colours are more vivid, and an outer one in which they are paler. Each exhibits the same series of colours, as the image produced by the prism, namely, red, orange, yellow, green, blue, indigo, and violet; but red is the uppermost colour in the interiour bow, and violet in the exteriour bow. Both the bows depend, though with some difference, upon the refraction of light combined with its reflection; and they are never seen but when the incident rays form, with the emergent rays, angles of certain magnitudes. The rays of light which render the inner bow visible are conveyed from the sun to the eye by two refractions, and one reflection; and those which show the outer bow, by two refractions and two reflections. The rainbow had been often seen, and for ages had excited both admiration and surprise, before any rational method of accounting for it had been proposed. The priests of some of the ancient idolaters always preferred the wood on which the rainbow had appeared to rest for the burning of their sacrifices, vainly supposing that this wood had a perfume peculiarly agreeable to their deities. At length, Kepler, who lived in the sixteenth century, supposed that it might arise from the refraction of the sun's rays upon entering the raindrops; and Antonio de Dominis, a Dalmatian bishop,



THE RAINBOW, OR IRIS.

improving upon Kepler's hint, succeeded, in a great degree in his attempt to explain the rainbow philosophically. He imitated the phenomenon by means of a glass globe, which showed that the rays of light were reflected as well as refracted. DesCartes improved his statement, and gave, in general, more precision to the mode of tracing the progress of the rays. And, lastly, Newton added the degree of accuracy that was wanting, by analyzing the distribution of the colouring, which is the main principle of this phenomenon. The accompanying figure and explanation will show how, upon this theory, the whole is accounted for.

In the interiour bow, let E F be two drops of the falling rain, and let S *a* be a ray of light falling on the drop E in *a*, from whence it is refracted first to *e*, thence is reflected to E, whence it is a second time refracted to the eye, suppose at O. In like manner, the same thing happens in the upper part of this bow, in the drop F. The angle C O E, 40° 2′, is the greatest in which the most refrangible rays can, after one reflection, be refracted to the eye; and therefore all the drops in the line O E send the most refrangible rays most copiously to the eye, and thereby strike the senses with the deepest violet colour in that region. In like manner, the angle C O F, 40° 17′, is the greatest in which the least refrangible rays can, after one reflection, be refracted to the eye; and, therefore, all those least refrangible rays come most copiously to the eye in the line O F, and strike the senses with the deepest red in that region. By reason of the intermediate degrees of refrangibility of rays coming from the drops between E and F, the space between E and F is painted with proper intermediate colours, and, therefore, the whole face of the bow will be tinged with all the colours in their natural order, namely, violet, indigo, blue, green, yellow, orange, red, and red from E proceeding to F.

The phenomena of the upper or exteriour bow Q H D are thus produced: let G and H be two drops in the extreme parts of it; let S G be a ray falling on the drop in G, whence it first refracted to *n*, from thence it is first reflected to F, from F it is a second time reflected to *g*, and from *g* it is a second time refracted to the eye, at O. The same is to be understood in the upper drop H; hence the angle C O *g*, 50° 42′, is the least angle in which the least refrangible rays can after two reflections, be refracted to the eye; and, therefore, the drops in the line O *g*, shall strike the eye with the deepest red, and the angle C O H, 54° 22′, is the least angle, in which the most refrangible rays, after two reflections can emerge out of the drops; and, therefore, those rays come most copiously from the drops in the line O H, and strike the senses with the deepest violet in that region. And, by the same reasoning, the drops between G H strike the senses with the intermediate colours; and so the colours in the whole width in the upper bow lie in this order from G to H, namely, red, orange, yellow, green, blue, indigo, violet, contrary to the order of those in the lower bow. The colours in the outer bow are fainter than those of the interiour one, because the rays of light are twice reflected in the drops of the former, but only once in those of the other, the light becoming fainter by every reflection. The appearance of rainbows is always circular, and all of the same apparent dimensions, because no bow can be produced but under angles of the same magnitudes; but different portions are seen at different times, on account of the varying altitudes of the sun. When that luminary is in the horizon, half the bow is visible, but less when he is higher. In the winter, the bow may be seen at any time of the day; but it is invisible some parts of the day in summer, that is, whenever the altitude of the sun is greater than 47¼ degrees.

Besides the ordinary rainbows, there are others occasionally noticed, as the lunar bow, occasioned by the moon; the marine bow, which appears at sea in the water which the wind carries off the tops of the waves, of which many are seen together, and have their curved parts turned towards the sea, and their ends upwards; the terrestrial bow, which is caused by the refraction of the sun's rays in drops of dew on the grass, change their place with the beholder, have the convex parts next the eye, and are of different curves according to the height of the sun.

THE METEORS.

The New Haven Daily Herald contains an article written by Professor Olmstead, of Yale College, in which it is stated, that the phenomenon of "falling stars" returned on the morning of the 13th of November, though in a form so much less imposing, than that of the last year, that many persons who were on the watch were not sensible of its occurrence. He states however that it did occur, and was attended by some remarkable peculiarities, though the presence of the moon until about 4 o'olock in the morning, permitted only the larger meteors to be seen.

The number of the meteors was smaller than last year, though much above the common average. At one o'clock, a fireball of unusual splendour blazed forth in the east, like a signal, and they were subsequently seen to fall, at a pretty uniform rate, until the light of day was far advanced. Some fell in the southwest, and a few in the northwest, but by far the greater number were in the eastern hemisphere.

The meteors appeared as before, to radiate from a common centre, in the constellation of Leo, and wherever they fell, their line of direction, if continued, would pass through that point. The radiant point was a little northward and westward of the place it occupied last year; and this point was not observed to vary in position for at least three hours; thus corresponding to the conclusions respecting the radiant of last year, from which it was inferred that the source of the meteors was beyond the influence of the earth's rotation, and consequently beyond its atmosphere.—The meteors in general fell in arcs of great circles extending from the radiant point, but four were seen to ascend from it. One shot from Procyon toward the radiant; and three moved slowly in a horizontal direction from west to east, south of Orion and Canis major.

The Zodiacal light began to appear at 4 o'clock, and extended itself from the horizon upward, terminating near the place whence the meteors emanated. Professor Olmstead considers this as confirming his suggestion, made last year, that the shower of meteors is derived from the extreme portions of a nebulous body, which revolves round the sun, and comes to its phelion near the orbit of the earth about the 13th of November. It was on independent evidence, that the body affording this light, usually called Zodiacal, was inferred to be the nebulous body itself. At 19 minutes past 3 o'clock, a faintly luminous auroral cloud branched off from the extreme parts of the luminous pyramid and extended itself in a long zone, rounded at the vortex, towards the pole (or perhaps the magnetick pole;) starting near Regulus, stretching across the head of Leo Minor, and terminating near Theta of the Great Bear. It began to fade in five minutes, and soon after disappeared.

Mr. Olmstead concludes by stating one or two facts, in order, by comparison with the observation of others, that the height and velocity of these bodies may be estimated. At one minute before 4, meantime, a bright meteor in the north, with a train, lasted one second. Its path was about 15° in length, at an angle of 60° with the horizon, inclining to the west, and terminating 10° beneath Zeta of the Great Bear. At 12 minutes past 4, another brilliant one described a path of 20° inclining to the west, at an angle of 75° with the horizon, and terminating near Beta Bootis, lasting at least two seconds. There were two others, whose paths were serpentine, and their light remarkably white, one of which described a path of at least of 25°, almost perpendicularly to the horizon, inclining to the west, and terminating 6° below Deneholа.

GEOGRAPHY.

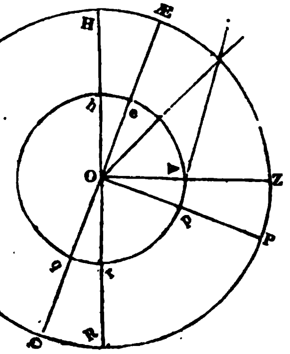
GENERAL ~~DESCRIPTION OF THE~~ METHOD OF FINDING THE LATITUDE OF A PLACE.

Having fixed upon the two circles of position by a reference to which the position of a place is to be determined, it will now be necessary to explain how distances from each of these circles (being the latitudes and longitudes of places) may be ascertained. This depends entirely upon the supposition that the earth is a spherical body situated in the middle or centre of the concave or hollow sphere of the heavens, and that every circle traced upon the globe of the earth has a corresponding circle in the heavens.

We shall begin with the latitude of places.

Let A be any place upon the earth's surface, and suppose in the annexed figure (*fig.* 5) that A *p r q h e*

Fig. 5.



is the meridian of A passing through *p*, the pole of the earth, and at right angles to the equator (*e q*,) the plane of the paper is the plane of the meridian, O the centre of the earth, *p* O its semi-diameter, to which (*e q*,) the equator, is at right angles, H R the rational horizon of A. Then A *e*, the arc or angular distance of A from the equator measured upon the meridian of A, is the latitude of A. But *e p*, or the distance of the pole from the equator, is 90°, or a quadrant, and A *r* the distance of A from the point *r*, where the rational horizon meets the surface of the earth, is also 90°, or a quadrant. Hence *e p* is equal to A *r*; if therefore A *p*, which is common to both *e p* and A *r*, be taken away from each, the remaining quantities A *e* and *p r* will be equal; and as A *e* is the latitude of A, it follows that (*p r*) *or the height of the pole above the horizon is equal to the latitude of the place.*

Again, A *p* is the distance of the pole from A: and as A *e* is the latitude of A, and *p e* is 90°, A *p* is the difference between 90° and the latitude, so that if A *p* be known, A *e*, or the latitude, is found, by substracting A *p* from 90°. A *p* is called the complement of the latitude, or the *co-latitude.*

Again, A *h* is 90°, and, therefore, A *e* being the latitude, *h e* is the co-latitude,—*h e, being the height of the equator above the horizon;* so that if *h e* be known, the latitude is found by substracting *h e* from 90°.

It appears, then, that if we can find any one of the above four arcs, viz., A *e*, *p r*, A *p*, *h e*, the latitude of A will be known: and the mode of determining these arcs, *is by measuring similar arcs of corresponding circles in the heavens.* Let Z P R Q H Æ be the circle in the heavens which corresponds with the meridian circle passing through A, and Z, P, R, Q, H, Æ, points in the heavens corresponding with A, *p*, *r*, *q*, *h*, *e*. *The attention of the geographer is then transferred from the consideration of the several arcs A e, p r, A p, h e, to the corresponding arcs in the circle in the heavens, Z Æ, P R, Z P, H Æ:* for if any of these be determined in their number of degrees and parts of degrees, the latitude is found directly. Thus it is, that the geographer depends so much upon the science of astronomy for the solution of the most important geographical problems. Persons who are in the slightest degree acquainted with geometry, or with the most simple properties of the circle, will not object to the above-mentioned mode of determining the latitude of places on the earth by means of corresponding arcs in the heavens, that these corresponding arcs are of different magnitudes; for in computing the latitude, we do not so much want the actual admeasurement and linear quantity of the arc of the meridian intercepted between the given place and the equator, as the number of degrees and parts of a degree which it contains, or, in other words, the proportion which this intercepted arc bears to the whole circumference of the meridian circle. And as arcs are the measures of angles, the arcs, Z Æ and A *e*, are both measures of the same angle at *o;* and, therefore, although they are unequal in magnitude, yet they mutually bear the same proportion to the circumference of the circles of which they are parts; that is, Z Æ contains the same number of degrees as A *e:* and as the latitude of a place is always expressed in degrees and parts of degrees, the number of degrees contained in the arc in the heavens, Z Æ, which corresponds with the arc of the meridian A *e*, will be the latitude of a. If, after having ascertained the latitude in this manner, that is, in degrees and parts of degrees, the actual linear magnitude contained in the latitude, or the geographical distance between A and the equator measured upon the meridian, be required, it may be obtained thus. Let an observer at A travel upon the same meridian in a direction due north or due south, (*i. e.* from or towards the equator,) until the pole star has, with respect to the observer's horizon, been raised or sunk one degree (which may be known from observation:) then as the star is itself stationary, this gain or loss of one degree in its station with respect to the horizon, has been caused by the observer having travelled exactly one degree, measured upon a meridian of the earth, nearer or farther from the north pole. If this space be actually measured, the result, expressed in linear measure, will give the magnitude of a degree of latitude in geographical miles and parts of a mile; the quantity thus found, being multiplied into the number of degrees and parts of a degree, will give the actual linear distance between A and the equator. The process thus conducted is on the supposition that the earth is perfectly spherical. A degree of latitude measured in this manner contains about sixty-nine miles.

How the spaces or arcs Z Æ, P R, Z P, H Æ in the heavens are to be measured by a spectator at the spot A on the surface of the earth, is now to be explained. This is done by means of observations made by the spectator at A, upon some heavenly body, with an instrument adapted for the purpose of measuring circular arcs: by these observations, which are made when the heavenly body is either upon the meridian of the place or not, the angular distance of the body from the zenith or from the horizon is ascertained. Thus if *s* be the sun (see *fig*. 5.) on the meridian, its angular distance *s* Z from the zenith, (called its zenith distance,) or its angular distance *s* H from the horizon, (called its altitude,) is measured, and ascertained in degrees and parts of degrees.

As, however, A is the place at which these observations are made, the angle Z A *s* is all that can be determined from observation; but this angle is not the measure of the arc Z *s*, because A is not the centre of the sphere of the heavens; but the angle Z O *s* is the proper measure of this arc, since, by the supposition, the meridian circle and the corresponding one in the heavens have the same centre, O; and it is a well known truth in geometry, that the angle Z A *s* is greater than the angle Z O *s* by the angle A S *o*. This conclusion, expressed in common language, may therefore be stated thus: that a spectator at A, looking upon a heavenly body at *s*, will see it lower down in the heavens, namely, at *s'*, or farther removed from the zenith point Z, than a spectator situated at the centre of the earth, who would, at the same instant of time, see the same body at *s''*; the difference of the *apparent* places which the body, *s*, will thus occupy in the heavens, as seen from the surface of the earth, and as seen from the centre, is the angle *s' s s''*, which is equal to the angle A *s* O. This angle is formed by two lines drawn from the extremities of the earth's radius, or, in geometrical language, is the angle subtended by the earth's radius, at the distance of the body *s*. This angle is called *parallax*[*] of a heavenly body and increases the zenith distance of *s*. It is obvious that parallax produces a contrary effect upon H *s*, the altitude of *s*, and that as the zenith distance is *increased* by the angle A *s* O, so the horizontal distance or altitude is *diminished* by the same angle. *The general effect therefore, of parallax is to depress a heavenly body.* If, however, the distance of the body upon which an observation is made, be so great, that it would be seen in exactly the same position in the heavens by a spectator at the surface of the earth, and one at the centre, it is evident that the angle *s' s s''* or A *s* O (the parallax) would be so small as to escape observation, and would, to our senses, vanish. This is the case with the fixed stars; but with respect to the sun and moon and planets, whose distances are not so great, the parallax has an observable effect upon their apparent positions, as they are seen from different parts of the earth's surface, or from the earth's surface and its centre. And this circumstance raises a necessity for correcting the *observed* distances of these heavenly bodies from the zenith or horizon of a place, in order to arrive at the *true* distance, as they would be seen from the earth's centre, and that the respective arcs Z *s* and H *s* may be accurately measured. The parallax is computed and given in astronomical tables, for the purpose of making this requisite correction.

[*] From a Greek word, and thus applied, signifies simply a *change* of place.

AEROSTATICKS, OR THE ART OF FLYING.

Thomas Walker, Portrait Painter, Hull, in 1810 wrote "a treatise on the art of flying, by mechanical means; with a full explanation of the natural principles by which birds are enabled to fly: likewise instructions and plans for making a flying car with wings, in which a man may sit, and, by working a small lever, cause himself to ascend and soar through the air." This treatise was republished in this country in 1814: and the American publisher says he was induced to reprint it, "not from a belief in the importance or practicability of becoming aerial voyagers, but from an opinion, that the ingenuity of argument, and the information it contains, are worthy of notice." We shall lay this subject and this author's argument, before our readers, with a belief that artificial flying is important, practicable and attainable. The scheme may be considered by others notably, visionary, and Utopian. So was that of sailing in balloons, so was that of Columbus in reference to a new continent, and that of Robert Fulton in the application of steam to boats and vessels, as a propelling power. In affirming our belief of the practicability of flying, we are supported by Lord Bacon, Mr. Willoughby, De Gusman, Bishop Wilkin, Friar Bacon, Reinser, the aforementioned Tom Walker, and hundreds of others. A few years ago, and the scheme of making a passage from New York to Albany in ten hours, would have been denounced as Utopian as that of flying may be now by the incredulous. Yet that has been attained, and there is every probability, that Mr. Burden will be able to accomplish the same passage in six hours! Reasoning from these wonderful improvements in the ease and rapidity of transitions upon the surface of the earth, why will not the analogy furnish grounds for the belief, that transitions through the atmosphere in a manner analogous to the passage of birds, may be likewise attained? A pruriency for the novel and the marvellous has pervaded men's minds from the beginning, in all ages and countries, but never more thoroughly than at the present notable period. The existing plans for travelling, and pleasure excursions seem to be however nearly perfected; and we see no other inlet for the inquisitive curiosity of the age, than to turn its uneasy eye to the consideration of that art which in its perfection promises to do for us without labour, what is now accomplished only by immeasurable toil; and to supersede entirely the necessity of using horses and carriages, the expense of slow railroads and steam boats, and the danger of sea voyages! If that daring which proclaims that "some things may be done as well as others," or that eastern ingenuity, which declares "there is more than one way to the woods" should be able eventually to pass our sky in a trackless flight to some unexplored clime, demonstrating the perfectability of Aerostation, by actual and successful experiment, with what enthusiasm should we hail the enterprise! With what avidity should we seek to accomplish ourselves in that art which would be the consummation of our early and devout wishes! For who from the days of the Conscript fathers, at one time or another, has not felt a longing, lingering inclination to fly? For our part, we hesitate not to confess, that at an early period in our personal history, we might have been observed attempting to "wing our eagle flight" from our father's corn-house stairs with a pair of the largest turkey's wings among our good grandmother's collection in our hands, and turkey's tails affixed *à la* Daedalus to our feet. We acknowledge the experiment failed, and our misfortune although not Daedalian, was still a caution for the future; but we might find that apology in our youth, which Reinser the 2d did in his age; that, "at that age, we are not well qualified to engage in violent corporeal exertions?" But, because of the failure of these premature experiments, we should not lose sight of that happy period, which we would contemplate as a certainty in the future, when, as the famous Bishop Wilkin declares, it will become as common to hear a man call for his wings, when going a journey, as it is now to call for his boots and spurs. Relinquishing our own speculations however for the present, let us return to Thomas Walker, who treats the subject soberly, and reasons plausibly, as will be seen.

Mr. Thomas Walker states that his invention for attaining the art of flying is founded *entirely upon the principles of nature*. Assuming that the same cause will ever produce the same effect, he demonstrates that, artificial wings constructed on philosophical principles, resembling those of birds, large enough, and to be applied in the same manner as birds apply them, and with sufficient power, will enable a man to fly as well as a bird. He then gives a history of the science of Aerostaticks, relating that De Guzman in 1709, invented a machine by which he was able to raise himself 200 feet in the air. And after giving an account of the Condor, the largest bird of S. America, he proceeds to describe the construction and application of the wings of a bird.

The first use of the wings is to expand, and by that means to give the bird a secure hold upon the air below it, which hold is always in proportion to the dimensions of the wings. The tail produces the same effect. We see that by means of a pair of wings and a tail duly expanded, in a perfectly *passive state*, and aloft in the air, without any muscular motion, a bird procures a suspending power, which counteracts the specifick gravity of its body, and prevents its being precipitated to the ground; such is the effect of the wings and tail when in a passive state.

He next takes some notice of the quill feathers. As they were intended to swim with in so light and subtle a fluid as the air is, it was necessary that they should be formed of the lightest materials imaginable; and as they were intended to strike upon the air with great power and rapidity, it was requisite that they should possess, in the shafts, great strength with elasticity; it was expedient too, that the quill feathers should separate and open, to let the upper air pass through the wings, to facilitate their ascent, when they are struck upwards; it was also necessary that they should all shut close together, forming each wing into a complete surface or web, when they are, by the muscular power of the bird, forced down, in order to give a more secure hold upon the air below, and by that means keep the bird up.

Now if we do but examine the quill feathers, we shall find in the shafts astonishing strength with elasticity, and very little specifick gravity indeed. The webs of the quill feathers are broader on one side of the shafts than the other, which causes them to open as the wings move up, and to shut as they come down, exactly answering the purposes already mentioned; therefore, we see how wonderfully complete the wings are in all their parts, and how effectually they serve all the uses required.

He then shows the application and effect of the wings and tail in an *active* state.—When a bird, by the power of its pectoral and deltoid muscles, puts its wings into action, and strikes them downwards in a perfectly vertical direction upon the air below, that air being compressed by the stroke of the wings, makes a resistance, by its elastick power, against the under side of the wings, in proportion to the rapidity of the stroke and the dimensions of the wings, and forces the bird upwards; at the same time, the back edges of the wings being more weak or elastick than the fore edges, they give way to the resisting power of the compressed air, which *rushes upwards past the same back edges*, acting against them with its elastick power, and thereby *causes a projectile force*, which impels the bird forwards; thus we see that by one act of the wings the bird produces both *buoyancy* and *progression*. When the tail is forced upwards, and the wings are in action, the bird ascends, and forced downwards it consequently descends; but the *most important use of the tail is to support the posteriour weight of the bird*, and to prevent the vacillation of the whole.

The following observations upon the wonderful difference in the weight of some birds, with their apparent means of supporting it in their flight, may tend to remove some prejudices against the plan, from the minds of some readers. The weight of the humming bird is one drachm, that of the condor not less than four stone; now if we reduce four stone into drachms, we shall find the condor is 14,336 times as heavy as the humming bird. Yet, by the same mechanical use of its wings, the condor can overcome the specifick gravity of its body with as much ease as the little humming bird. But this is not all; we are informed that this enormous bird possesses a power in its wings, so far exceeding what is necessary for its own conveyance through the air, that it can take up, and fly away with a whole sheep in its talons, with as much ease as an eagle would carry off, in the same manner, a hare or a rabbit. This we may readily give credit to, from the known fact of our little kestril, and the sparrow hawk, frequently flying off with a partridge, which is nearly three times the weight of either of these rapacious little birds.

Let us attend to this subject a little further; let us consider these wings of the condor, which, with a *mechanical action alone*, produces a power that is capable of carrying through the air both the bird and the sheep, weighing together not less than ten stone, which would then be 204,000 *times the weight of the humming bird!* When this is duly considered, with reference to the plan, what encouragement does it not give to prosecute the art of flying? particularly so, when we consider that a man of ten stone weight, in a machine weighing two stone will only exceed the weight of the condor *one-fifth part;* this is a mere trifle compared with the astonishing difference there is between the humming bird and the condor.

The condor carries ten stone, with wings of twelve feet expansion from tip to tip; the humming bird carries one drachm, with three inches expansion; the common wren is three times as heavy as the humming bird, and has but one inch more of wing; a pigeon weighs sixteen ounces, which is 256 times as heavy as it is, and has only ten times more expansion of wing; the goatsucker is forty times as heavy, and has seven times the length of wing. The above are instances sufficient to prove that birds' wings are not multiplied in their length in the same proportion with the increased weight of their bodies; therefore, as a man weighing ten stone, and his machine two, will only exceed in weight one fifth part of the weight of the condor and his prey; and as the wings of the condor are about twelve feet, suppose we make a pair of wings of silk, one fifth longer than they are, which will be about fourteen feet and a half, he is persuaded they will be found amply sufficient, as they will far exceed the progressive increase of birds' wings.

We thus clearly discover that the addition of a few ounces, pounds, or stones, is no obstacle to the art of flying; the specifick weight of birds *avails nothing;* for by their *possessing wings large enough*, and *sufficient power to work them*, they can accomplish the means of flying equally well upon all the various scales and dimensions which we see in nature.

Such being a *fact*, in the name of reason and philosophy, why shall not a man with a pair of artificial wings, *large enough* and with *sufficient power to strike them upon the air*, be able to produce the same effect?

All the attempts hitherto made in the art of flying, by different persons, according to historians, have been mere childish whims, not in the least degree calculated to insure success; they each make a pair of detached wings, some of silk, some of leather, and some of sheet iron, and various other materials; they fastened them upon their shoulders or arms; thus equipped, they placed themselves upon some eminence, such as a high tower, or a church steeple, then took to their wings; but few of them were fortunate enough to escape without some injury.

It is utterly impossible for a man to fly, with a pair of wings fixed to his shoulders or arms, with the whole weight of his body hanging down, and depending entirely on his pectoral muscles for support. These muscles in a man, are many degrees too weak to keep extended a pair of wings of sufficient expansion to effectually counteract the specifick gravity of his body. Let a man suspend the weight of his body, with his arms extended, holding to an horizontal beam by his hands, and he will very soon find the insufficiency of the strength of his arms to support his weight. On the plan which we have conceived for flying, the want of strength in the arms is amply provided for. By furnishing a man with a car to sit in, the whole weight of his body is supported by it, and as he sits much in the same manner as if he were rowing a boat, he is enabled to bring into action his *whole bodily strength*, which *far exceeds* the strength of his arms only; and by sitting in such a position, his strength can be exerted with a far greater force than in any other attitude whatever; he at the same time gains an *additional advantage*, in this plan, by exerting his strength upon a lever.

The two greatest requisites for accomplishing the art of flying, are these; first, *expansion of wings large enough* to resist in a sufficient degree, the specifick gravity of whatever is attached to them; second, *strength enough* to strike the wings with a sufficient force to complete the buoyancy, and give a projectile motion to the machine. With these two requisites combined, *flying* must be accomplished.

Walker made the following experiment, to which we call the *particular* attention of readers; as it *positively* demonstrates the cause of the projectile motion. He made a pair of small wings, of fine paper, and very small slips of wood to keep them extended, and fixed on a tail of the same materials, imitating, as near as he could, the wings and tail of a bird, when expanded in a *passive* state. He then suspended a small weight from under them, with a piece of thread, exactly in the centre of gravity; held them up as high as he could reach, then took away his hand and left them flat upon the air, without giving any impulse to them whatever; and by the weight pressing downwards, the air under the wings became in some degree compressed, and by its reaction against the under side and the back edges of the wings, *they were projected with an oblique descent from one end of the room to the other, carrying the weight all that distance*, which, without the wings being of this particular construction, could not have been done.

This is an experiment which any of our readers may make trial of, for their own satisfaction and amusement; and that they may be better able to comprehend us, we have given a representation of it in the plates. Vide plate 3.

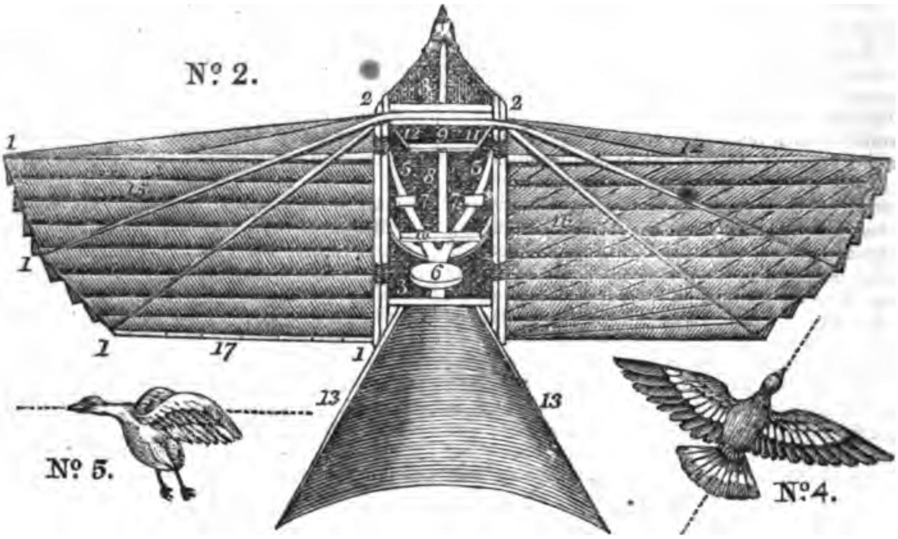
Mr. Walker thinks the following, the only plan upon *which* a flying machine can be constructed.

Make a car of as light materials as possible, but with sufficient strength to support a man in it; provide a pair of wings, of about eight feet each in length, let them be horizontally expanded, and fastened upon the top edge on each side of the car, with two joints each, so as to admit of a vertical motion to the wings, which motion may be effected by a man sitting, and working an upright lever in the middle of the car; a tail, of about seven or eight feet long, and the same breadth at its extremity, must be fixed to the hinder part of the car, and spread out flat to the horizon in the same manner as we see the tails of birds. Vide plate 2.

The grebes, by their manner of flying, evince that the most important use of a bird's tail is *to support* the *posteriour weight* of the body; for the Creator having left the whole of this class of birds, totally destitute of any portion of a tail, they are, consequently, always seen, when flying, to have their bodies hanging down nearly in a perpendicular direction, and appear to fly with great difficulty, (vide plate 5;) but this impediment in flying is of little consequence to them, their organization being perfectly adapted to their mode of living.

A coachmaker is accustomed to make strong work with little weight of materials; he, therefore, would be the most proper person to make a machine of this kind. The man must sit in the middle, between the wings and the tail, so as to be a little behind the centre of gravity, for the purpose of causing a little preponderance of weight to act upon the back edge of the wings; for if there be not in some degree, more weight behind than before, when the compressed air is making a resistance against the underside and back edges of the wings, where it rushes upwards again, causing a great reaction, it would, of course, elevate the hinder part of the car too much.

The wings and the tail should be made of silk, very compactly woven, and as impervious to the air as possible. The silk which the wings are formed of, should be laid on in separate broad slips, and should open to admit the air to pass through as the wings move up, and close together again as they come down, in the same manner as he has described the action of the quill feathers, in the wings of birds (vide plate 2;) although upon the experiment being tried, this method may not be found so absolutely requisite; for we see flying squirrels, bats, butterflies, beetles, flying fish, &c. with wings formed of compact membranes, all flying exceedingly well. The Madagascar bat has a body the size of a rabbit, with wings four feet long, formed of entire membranes, and although so large, it can fly as well as our little native bats; therefore, it is possible, that a pair of artificial wings may be formed without any valves, and yet answer equally well; but this can only be determined by actual trial.



PLAN OF THE CAR.

No. 2. 1 1 1 1 The shafts of the left wing. 2 2 The two side rails which form the top edges of the car, and upon which the wings are to be fixed with two joints each. 3 3 Two cross bars three feet each, holding the two side rails together. 4 The middle rib with its two ends fastened to the side rails, bending down in the middle, so as to form the bottom of the car three feet below the top rails. 5 5 The two fore ribs to be united to the fore ends of the side rails, and to bend down to the middle rib, at the bottom of the car, and there joined to the back rib, which must have its upper end well fixed to the hindermost cross bar. 6 The seat for the man to sit upon, fixed with its front ten inches behind the axis of the crank. 7 7 Two foot-boards for the man's feet to rest upon. 8 The crank, two feet six inches long. 9 The head of the crank, eighteen inches long. 10 The axis of the crank, eighteen inches long. 11, 12 Two iron rods, fixed with joints to the two inner ends of the wings, and then to the two ends of the crank head.—13, 13 Two shafts to give expansion to the tail.—14 Small cords to brace the fore shaft of the wings. 15 Eight longitudinal parallel cords, well stretched, to which slips of silk must be sewed, each slip about seven inches broad; and the oblique cords, 16, must be well stretched and knotted to them at each part where they cross. 17 A number of small threads, running across the under side of the wings at about four inches asunder, to which each slip of silk must be attached, that they may be prevented from opening more than half an inch from each other when the wings move upwards.

No. 3. A pair of paper wings, ten inches each in length, with a tail ten inches long down the middle; the frame or skeleton of the wings and tail to be formed of small sticks, about the thickness of a crow quill, and the paper must be fixed on by its edges being neatly pasted to the sticks: at the posteriour angle of the wings the *paper* must have a piece of fine thin cloth pasted upon it to give strength to it at the corner.

No. 4. Represents a pigeon flying from the ground in the angle of sixty.

No. 5. Represents a grebe flying horizontally.

It is necessary to observe, that the car in which the man is to sit, must be entirely covered on the outside with silk or very thin leather; and along each side of the car, the silk or leather must be united to the base of the wings, to prevent, as much as possible, the air from escaping any where but from the back edges of the wings: should that be neglected, when the air is compressed by the wings being struck downwards, it will rush upwards through the car, and thereby fail of giving that resistance against the underside of the wings, which is necessary for the purpose of effecting buoyancy and progression.

He thinks that the shafts of the wings and tail would answer the purpose in the best manner, if they were each of them made of six long slips of thin whalebone, dressed tapering to a point, then wrapped together in a round form, with small twine, from end to end; and filled with cork along the inside. By making them in this manner, they would spring against the air, would be very light, and so strong, that it would be impossible to break them with the power or weight of any person. By forming them as above, we shall humbly imitate the shaft of a quill feather, which is composed of a thin horny shell, containing a delicate light pith along the inside.

He here recommends to his readers to *particularly observe*, that a *main point in this treatise* is, that they should not overlook the importance of the knowledge of the reaction of the air against the underside and *back edges of the wings;* for this is what causes the projectile motion, which is indisputably proved by the flying of the paper wings across a room.

He says people commonly know nothing of the process of flying, and thus further illustrates how flying is effected. The air, when struck upon by wings, produces an effect by its reaction against the underside and back edges, similar to that which is caused by the wind blowing with sufficient force against a mill-sail, when it *rushes off on one side*, and impels the sail to move; with this difference only, that the sail being fastened at one end to an axis, is made to revolve, whilst the bird, being at full liberty in the air, is caused, by the expansive power of the air acting with a resisting force *against the back edges* of the wings, to glide forward in a right line.

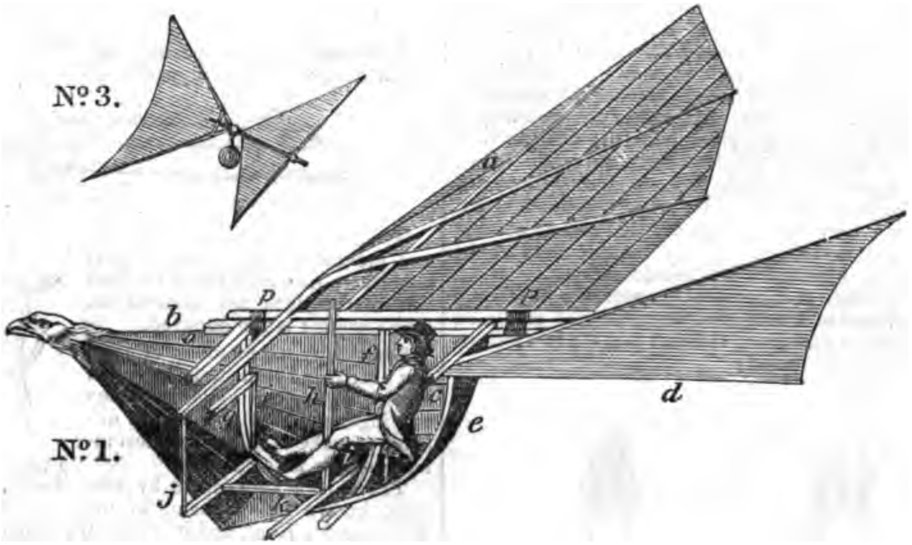
The wings of the machine he thinks should be as large as can be possibly moved with ease.

After having described how to construct a machine to fly in, which, like the swift, or great black martin, (*apus* Lin.) cannot fly from the surface of the ground, but must have an elevation to rise from; it becomes necessary to give directions how it may be made to ascend. Set two tressels fast upon the ground, one six feet high and the other four and a half, at twelve feet distance from each other; then lay upon them two or three planks which will form a stage with an oblique plane, upon which the car must be placed, with its head pointing to the higher end of the stage.

A person may then get into the car, and sit a little behind the centre of gravity, which must be adjusted before the car is placed there; being thus elevated, he will have depth enough on each side of the car to admit of his wings striking upon the air. He must then push the lever forward about eighteen inches from its perpendicular line, the tips of the wings will then rise three feet and a half above the level of their joints; he must then, with a brisk exertion, pull the lever backwards, eighteen inches past the perpendicular line, and the tips of the wings will be struck downwards, passing through an arch of seven feet; and suddenly driving down and compressing the air in that arch, part of which will escape past the back edge of the wings (as described before,) making at the same time a re-action which will push the wings forward: and as the car and the wings are first placed on an oblique plane, they will be impelled forwards, making an oblique ascent. The projectile impulse will naturally force the machine upwards in any angle in which the plane of the wings is laid, something similar to what may be observed in the raising of a common paper kite, except in a right angle, or perpendicular line; but the nearer the angle of ascent inclines to the line of the horizon, the easier will the machine be found to ascend. Pigeons can ascend very near in a perpendicular line, but such an ascent would be too incommodious for artificial flying. Plate 4.

When the car is brought to a sufficient altitude to clear the tops of hills, trees, buildings, &c. the man, by sitting a little forward on his seat, will then bring the wings upon an horizontal plane, and by continuing the action of the wings, he will be impelled forwards in that direction. To descend, he must desist from striking the wings, and hold them on a level with their joints; the car will then gradually come down, and when it is within five or six feet of the ground, the man must instantly strike the wings downwards, and *sit as far back as* he can; he will by this means check the projectile force, and cause the car to alight very gently with a retrograde motion. The car, when up in the air, may be made to turn to the right or the left, merely by the man inclining the weight of his body to one side.

Birds ascend by turning their tails upwards, descend by turning them downwards.



THE SECTION OF THE CAR.

No. 1. *a* The right wing. *b* One of the side rails, upon which the wing must work with two joints to admit of a vertical motion, for no other motion can answer the purpose. *c c* The two cross bars which hold the side rails together. *d* Half of the tail. *e* The back rib, fixed to the middle of the hinder cross bar, and then brought down [illegible] the bottom of the middle rib. *f* The middle rib, fixed to the two side rails, and *bended* down three feet below, to form the bottom of the car. *g* One of the fore ribs, fixed to the fore corner of the car on the right side, and then to the back rib at the bottom. *h* The upright lever, fixed into the crank, to move the wings with. *i* The axis for the crank to work upon, which must be placed two feet nine inches below the top edge of the car. *j j* Two iron rods two feet nine inches long, to unite the inner ends of the wings to the ends of the crank head. *k* Two oblique prongs to be fixed to the back rib, projecting forward, with the points twenty inches asunder, and fifteen inches below the crank when it stands in a level direction. They are to keep extended the fore part of the bottom of the car, so as to admit of room for the crank head to work up and down. *l* The crank, two feet six inches long; this causes the wings to strike up and down, by means of the man working the lever backwards and forwards. *m* The crank head, eighteen inches long. *n* The seat for the man to sit upon, fixed to the back rib. *o* A piece of wood projecting from the middle of the fore cross bar, to which is fixed a head made of cork-wood, and a number of small cords to be stretched to the two fore ribs, and the prongs at the bottom of the car; in the same manner cords are to be fixed all round the car, to support the silk which covers the outside. *p p* Two joints which fasten the wings to the edge of the car.

So much for Thomas Walker's ingenious experiments and inquiries, and by no means shallow discoveries, which he claims as exclusively his own. If any one can produce a better plan, we should like to hear of it; for we should heartily rejoice to hear that we were about to live in that period when the prediction of Bishop Wilkins would be verified. In a future number we shall allude to other plans, and illustrate the art of flying as exemplified in quadrupeds and fishes.

KNOTS.

It is always worth while, even in the simplest acts of our lives, to endeavour to be as nearly perfect as possible. A well-tied knot is often a matter of considerable moment, and may ensure the safety of lives and property, while many a serious accident has happened, both on sea and shore, from the want of skill or care in this apparently easy operation. At first sight, few things would seem to be more easy than the tying of a knot; but to perform this simple operation well, that is, so as to produce the effect required with the least labour and the greatest degree of neatness, is the result of considerable practice, and of some judgment.

The following are a few of the principles necessary to be attended to in making good knots. In the first place, the knot should be so made as to prevent the cords with which it is formed crossing each other at right angles, for in such case there would be more chance of the rope breaking, than if the strain was in an oblique direction; this may be illustrated by the two following diagrams, which represent two methods of tying the ends of a cord together. In the first case, which is the common method, if the cords A B and C A are pulled in opposite directions, the strain will act at right angles at A A, and the friction at those points will be so great as to risk the breaking, or rather the cutting, of the string at those places. But if we look at the *Weaver's Knot*, fig. 2, we shall see that, when drawn tight, the strain which occurs at A and B, is in an oblique direction. There is, also, another advantage attending this knot, namely, the greater compactness of its form, and from its allowing, when drawn tight, both the ends to be cut off nearly close. In many cases, however, knots, particularly those formed by fishermen and sailors, must possess other properties besides that of security; they must be quickly tied and as quickly undone, and, in these instances, the thickness of the ropes must be also taken into consideration.

Fig. 1.

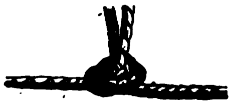
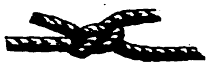
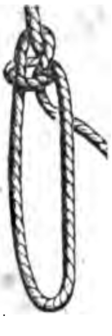


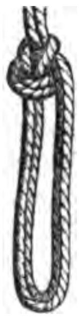
Fig. 2.



On ship-board, it is frequently necessary to form a loop at the end of a rope, for the purpose of obtaining a better hold or purchase; to effect this the two following methods are adopted:

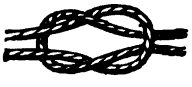


A bowline-knot.

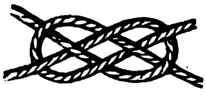


A bowline-knot in the bight of a rope.

The next two Engravings are examples of different methods of fastening together the ends of two ropes; this is called *bending*:

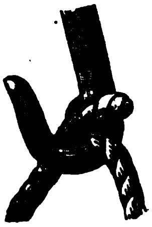


A reef-knot, or bend, before it is drawn tight.

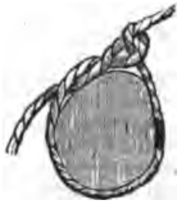


A carrick-knot, or bend, before it is drawn tight.

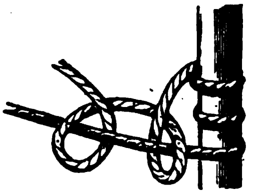
Hitches are an extremely useful description of knots, by means of which the end of a rope is fastened round any object, so that it may be easily cast off again.



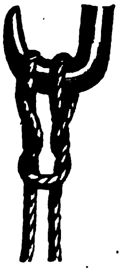
A blackwell-hitch.



A timber-hitch.

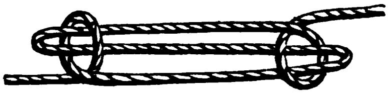


A rolling-hitch.



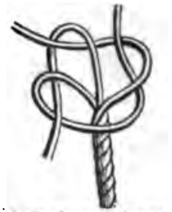
A cat's-paw.

A *Sheepshank* is a species of knot made in the middle of a rope, for the purpose of shortening it.



A sheepshank, before it is drawn tight.

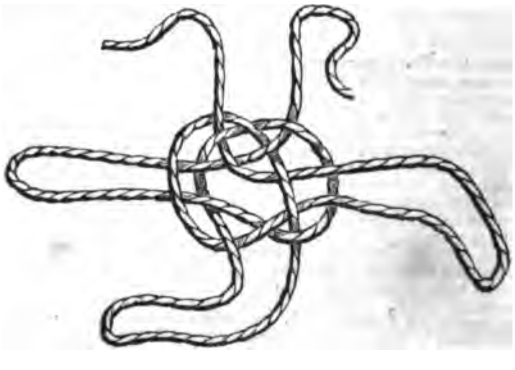
To fasten off the end of a rope, and prevent its unravelling, is at times very necessary; and to effect this many plans are resorted to. The simplest is the annexed.



A single wall-knot, before it is drawn tight.

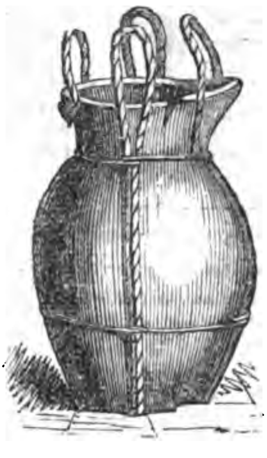
Splices, or the methods of joining neatly and intimately the ends of two ropes, are very numerous and ingenious, but it would be difficult to make even the simplest intelligible, in an engraving.

There is a knot made by seamen, known by the name of the *True-lover's Knot*, and it is difficult, without inquiring into the uses to which it is applied, to understand in what manner it could have obtained this romantick name. On board ship, it is frequently necessary to raise water by means of a bucket or other vessel, and if this vessel should happen to be without a handle, it



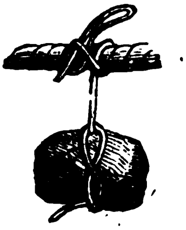
The true-lover's knot.

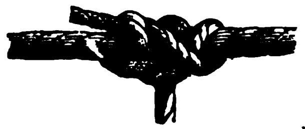
would require some ingenuity to find out the means of lowering it into the water: to gain this point, the seamen have invented the knot represented in the engraving.

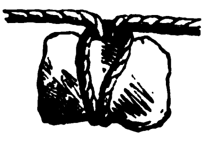

Use of the true-lover's knot.

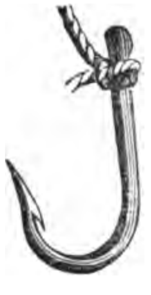
This being the purpose to which the knot is applied, we have now to discover in what manner it has acquired its name. To do this, let us suppose our sailor to be on shore, and paying a visit to his relations; his well-known skill is, of course, put in requisition, and all the pitchers of his female friends which have lost their handles are brought to him, to be supplied with new ones; and, as a compliment for his exertions, the knot which his ingenuity has formed is called a true-lover's knot.

The remaining illustrations are knots made by fishermen and anglers and will sufficiently explain themselves.




To tie a short line, to which a hook is attached, to a larger or ground line.


Two methods of fastening a weight to a line.


To tie a line to a fish hook.

WILD MAN.

A man has lately been found in the midst of the woods and mountains of Hartzwald, in Bohemia, who it is presumed must have been there from his infancy. He appears to be about thirty years of age, but he cannot articulate a single word. He bellows, or rather howls, his voice being like that of a dog. He runs on all fours, and the moment he perceives a human being, clambers to the top of a tree like an ape, and jumps from branch to branch with amazing agility. When he sees a bird or any other game, he pursues it almost always with success. He was brought to Prague, but all attempts to tame him have been fruitless; indeed, he appears incapable of acquiring the habits of civilized life.—*Paris Paper.*

IMPORTANT EXEMPLARY CERTIFICATE, FROM PRESIDENTS MADISON, ADAMS AND JACKSON.

Being satisfied from observation and experience as well as from medical testimony, that Ardent Spirit, as a drink, is not only needless, but hurtful; and that the entire disuse of it would tend to promote the health, the virtue and the happiness of the community—We hereby express our conviction, that should the citizens of the United States and especially all *young men*, discountenance entirely the use of it, they would not only promote their own personal benefit, but the good of our country and the world.

Signed, James Madison,
Andrew Jackson,
John Quincy Adams.

October, 1834.

GOOD BOOK-KEEPERS.

Sir Walter, in lending a book one day to a friend, cautioned him to be punctual in returning it. 'This is really necessary,' said the poet in apology; 'for though many of my friends are bad *arithmeticians*, I observe almost all of them to be good *book-keepers*.'

(From The Southern Rose Bud.)

THE AMERICAN BOY.

Look up my young American,
Stand firmly on the earth,
Where noble deeds, and mental power,
Give titles more than birth.

A hallowed land thou claimest, my boy,
By early struggles bought,
Heaped up with noble memories—
And wide—ay, wide as thought!

On the high Allegany's range,
Awake thy joyous song;
Then o'er our green savannas stray,
And gentle notes prolong.

Awake it mid the rushing peal
Of dark Niagara's voice,
Or by thine ocean rivers stand,
And in their joy rejoice.

What though we boast no ancient towers
Where "ivied" streamers twine!
The Laurel lives upon our soil *
The Laurel, boy, is thine.

What though no "min'ster lifts the cross,"
Tinged by the sunset fire?
Freely religion's voices float
'Round every village spire.

And who shall gaze on yon "blue sea"
If thou must turn away,
When free Columbia's stripes and stars
Are floating in the day?

Who thunders louder, when the strife
Of gathering war is stirred?
Who ranges further, when the call
Of commerce' voice is heard?

And tho' on "Cressy's distant field"
Thy gaze may not be cast,
While through long centuries of blood,
Rise spectres of the *past.*

The *future* wakes thy dreamings high,
And thou a note may'st claim,
Aspiring, which in after times
Shall swell the trump of fame.

Yet scenes are here for tender thought—
Here sleep the good and brave!
Here kneel, my boy, and raise thy vow
Above the patriot's grave.

On Moultrie's isle, on Bunker's height,
On Monmouth's heated line,
On Eutaw's field, on Yorktown's bank,
Erect thy royal shrine;

And when thou'rt told of "knighthood's shields,"
And English battles won,
Look up, my boy, and breathe *one* word;
The name of *Washington.* C. G.

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* The Laurel grows in its beautiful varieties throughout the United States. The Kalmin at the North; at the South, the splendid Magnolia Grandiflora.

STATUE OF PETER THE GREAT.

This superb work of modern art stands in one of the finest squares of St. Petersburgh, and of Europe, according to Sir Robert Ker Porter. It was erected by command of the Empress Catharine, and, like all her other projects, bears the stamp of greatness. The name of the artist is Falconer: "he was a Frenchman; but," adds Sir R. K. P. "this statue, for genius and exquisite execution would have done honour to the best sculptors of any nation. A most sublime conception is displayed in the design. The allegory is finely imagined; and had he not sacrificed the result of the whole to the prominence of his group, the grand and united effect of the statue and its pedestal striking at once upon the eye, would have been unequalled in the works of man. A mass of granite, of a size at present most immense, but formerly most astonishing, is the pedestal. A steep acclivity, like that of a rugged mountain, carries the eye to its summit, which looks down on the opposite side to a descent nearly perpendicular. The figure of the hero is on horseback, supposed to have attained the object of his ambition, by surmounting all the apparent impossibilities which so arduous an enterprise presented. The victorious animal is proudly rearing on the highest point of the rock, whilst his imperial master stretches forth his mighty arm, as the father and protector of his country. A serpent, in attempting to impede his course, is trampled on by the feet of the horse, and writhing in all the agonies of expiring nature. The Emperor is seated on the skin of a bear; and habited in a tunick, or sort of toga which forms the drapery behind. His left hand guides the reins; his right hand is advanced straight forward on the same side of the horse's neck. The head of the statue is crowned with a laurel wreath." It was formed from a bust of Peter, modelled by a young French damsel. The contour of the face, expresses the most powerful command, and exalted, boundless, expansion of thought. "The horse, says Sir Robert, is not to be surpassed. To all the beauties of the ancient form, it unites the easy grace of nature with a fire which pervades every line; and gives such a life to the statue, that as you gaze you expect to see it leap from the pinnacle into the air. The difficulty of keeping so great a mass of weighty metal in so volant an attitude, has been admirably overcome by the artist. The sweep of the tail, with the hinder parts of the horse, are interwoven with the curvatures of the expiring snake; and together compose a sufficient counterpoise to the figure and forepart of the animal."

This statue stands upon a rock which was found in a morass near Lachta, in Karelin, at a distance of eleven versts, or about 41,250 English feet. The dimensions of this stone were found to be 21 feet by 42 in length, and 34 in breadth; its weight is calculated at 3,200,000 lbs. or 1,600 tons. The mechanism for its conveyance was invented by Count Carbury, who went by the name of Chevalier Lascuri. A solid road was first made from the stone to the shore; then brass slips were inserted under the stone to go upon cannon balls of five inches diameter, in metal grooves, by windlasses worked by 400 men every day, 200 fathoms towards the place of destination. The water transport was performed by what are called camels in the dockyards of Petersburgh and Amsterdam.—*Lon. Mirror.*

ELOQUENT EXTRACT.

Mr. Everett makes the following patriotick appeal, while speaking of two great men in connexion with each other—Lafayette and Bonaparte:

"From this life nothing could draw him. Mr. Jefferson offered to him the place of Governour of Louisiana, then just become a territory of the United States; but he was unwilling, by leaving France, to take a step that would look like a final abandonment of the cause of constitutional liberty on the continent of Europe. Napoleon ceased to importune him, and he lived at Lagrange, retired and unmolested, the only man who had gone through the terrible revolution, with a character free from every just impeachment. He entered it with a large princely fortune;—in the various high offices which he had filled, he had declined all compensation;—and he came out poor. He entered it in the meridian of early manhood, with a frame of iron. He came out of it, fifty years of age, his strength impaired by the cruelties of a long imprisonment. He had filled the most powerful and responsible offices; and others still more powerful—the dictatorship itself—had been offered him;—he was reduced to obscurity and private life. He entered the revolution with a host of colleagues of the constitutional party. Of those who escaped the guillotine, most had made peace with Napoleon; not a few of the Jacobins had taken his splendid bribes: the emigrating nobility came back in crowds, and put on his livery; fear, interest, weariness, amazement, and apathy, reigned in France and Europe; kings, emperors, armies, nations, bowed at his footstool; and one man alone—a private man, who had tasted power and knew what he sacrificed, who had inhabited dungeons and knew what he risked; who had done enough for liberty in both worlds to satisfy the utmost requisitions of her friends—this man alone stood aloof in his honour, his independence and his poverty. And if there is a man in this assembly, that would not rather to have been Lafayette to refuse than Napoleon to bestow his wretched gewgaws; that would not rather have been Lafayette in retirement, and obscurity, and yet not proscribed, than Napoleon with an emperor to hold his stirrup; if there is a man who would not have preferred the honest poverty of Lagrange to the bloody tinsel of St. Cloud; that would not rather have shared the peaceful fireside of the friend of Washington, than to have spurred his triumphant courser over the crushed and blackened heaps of slain, through the fire and carnage of Marengo and Austerlitz,—that man has not an American heart in his bosom. That man is a slave, and fit to be father of slaves. He does not deserve to breathe the pure air, to drink the cold springs, to tread the green fields, or to hear the sabbath bells of a free country. He ought, with all his garters, ribands, and stars upon him, to be bolted down, with a golden chain, to the blazing pavement of a palace court yard, that when his lord and master goes out to the hunt of beasts or of men, he may be there,—the slave,—to crouch down, and let his majesty vault from his shoulder to the saddle."

FIRE-DAMP—THE SAFETY-LAMP OF DAVY.

What is generally known under the name of fire or choke-damp in mines, is just the coal gas or carbureted hydrogen escaping from strata of coal under particular circumstances, and flowing out so as to occupy the space of the mine. When such gas is accumulated in certain quantities, so as to amount to a half or even less of the air of the mine, on a lighted lamp or any flame being presented to it, an instantaneous explosion takes place. This gas is very prevalent in the mines of the English districts, but rare in those of Scotland. In the chymical process which takes place, by which vegetable matter is gradually changed into coal, there appears to be a formation of this carbureted hydrogen; for it has been found, on examining thin slices of the more bituminous sorts of coal with a powerful microscope, that numerous small bubbles of thin air are contained within the minute hollow tubes which still remain distinct, though somewhat flattened; thus indicating the true vegetable origin of the substance. When a stratum of coal that has been subjected to great pressure, and completely excluded from all communication with the external air, is suddenly broke in upon by the miner, the compressed air thus finds an opening, and, rushing out, expands in volume so as to fill a large space of the shaft or hollow part of the mine; and it will thus continue to do so until the whole of the confined gas makes its escape, or finds an equilibrium of density. There is yet another cause supposed to give origin to the fire-damp; and this is, the occurrence of what miners call *whin dykes*, or troubles. These are masses of trap rocks, which frequently come across the coal strata, and completely cut up and derange the levels of the various seams. These whin dykes evidently appear to be rocks thrown up from below by the action of internal fire, and at a period after the coal and its accompanying strata had been formed. That these rocks have been in a hot and melted state, is apparent from their general aspect and composition; but is further proved, from the fact, that, on each side where they come to touch the coal seams, the latter are completely charred; in other words, converted into a coke, or cinder. During this exposure to great heat, a large quantity of gas must have been produced, exactly in a similar manner as coal gas is artificially made; but owing to the process having taken place deep under ground, this gas has not escaped, but remains shut up in the various crevices of the strata under a strong pressure, until the operations of the miner expose the whole. In this way it is probable large volumes of fire-damp find their way into the hollows of mines; and it is remarkable, that, in Scotland, where few such whin dykes occur, although there are numerous other shifts or troubles of the strata, accidents from choke-damp are rare, or almost unknown; whereas, in the English districts, where dykes are very numerous, few coal-mines are ever entirely free from the noxious gas. In the neighbourhood of Newcastle, one of those coal seams was lately exposed, which strikingly illustrated the effects of charring, from the protrusion of a mass of rock through the coal; and numerous other instances leave no doubt of the fact.

Since ever coal mines have been extensively wrought the loss of human life from explosions of fire-damp has been very great. Every year had its awful calamities, and almost every month brought its detail of the sufferings of unfortunate victims, and of the bereavement and misery of many orphan families. At last the feelings of publick humanity were excited to a painful degree, and many proposals and attempts were made to remedy the evil. None of these, however, proved successful, till at length the genius of Sir H. Davy grappled with the subject. With his accustomed energy, he immediately set about considering the whole bearings of the matter; and first of all, by repeated inspections and experiments, made himself thoroughly acquainted with the enemy he had to vanquish. Having done so, he then patiently sat down to devise a remedy. Fortunately his efforts were crowned with complete success; and his highly ingenious invention had this rare merit, that it was not the result of happy accident, or the chance suggestion of the moment, but was perfected from one step to another, by patient experiments and philosophick reasoning. Like all other great inventions, when once discovered and explained, the safety-lamp of Sir H. Davy appears a very simple apparatus indeed. It consists of a common oil lamp, over which is screwed a cylindrical frame, covered with an extremely fine wire gauze, the apertures of which are not more than one-twentieth of an inch square. Every part of this cylinder and of the lamp is accurately soldered, so that no air can get admittance to the flame, except through the minute holes of the wire gauze. A wire passes upwards from the bottom, by which the wick is trimmed, and a tube communicating with the well of the lamp opens outside, by which oil may be poured in to replenish it, without having occasion to unscrew the gauze cylinder. Furnished with this lamp, the miner may go with perfect safety into places where the choke damp is lodged, and may calmly and without apprehension, pursue his subterranean labours, day after day, where, if he attempted to enter with a naked flame, immediate explosion and destruction would take place. Sir H. Davy, in his first experiments, tried the effect of conveying air for the supply of an inclosed flame, through long tubes with an exceedingly small bore, calculating justly, that flame, in passing through these long minute apertures, would lose its heat, and, consequently, its power of communicating flame to the external air or gas. Having ascertained this important fact, he next tried how short he might venture to make these tubes, and, gradually filing them down, he at length discovered that the thinnest plate of metal, when pierced with small holes, was quite sufficient for the purpose required. This immediately led to the trial of wire gauze, and hence his discovery was perfected. When the safety-lamp is immersed in the highly inflammable air of mines, the portion of air contained within the gauze cylinder is immediately exploded, but no communication of the explosion is made to the air around, because the flame of the burning gas, in passing through the small apertures of the wire gauze, is cooled down so much that its power of inflaming other air is lost. When the mixture of inflammable air in mines is only in moderate proportion, the miner can breathe it with comparative impunity, and the flame will be supported without an explosion; but where the gas prevails in greater proportion—and this will take place suddenly, and without previous warning—then the great importance of the safety-lamp is manifest. The miner is immediately apprised of the circumstance, and he can deliberately explore his way to another part of the mine, whereas, under other circumstances, a sudden explosion, and his inevitable destruction, would have been the consequence.

The beautiful simplicity of this contrivance of Sir H. Davy, the perfect manner in which it was found to answer all the purposes required, and the noble philanthropy with which its inventor freely bestowed it for the good of society, without fee or reward, could not fail to excite the admiration of all classes of the community. But those immediately concerned, the extensive coal proprietors of the English districts, were more particularly interested and excited by the invention, and, accordingly, as a mark of their gratitude and respect for the high talents of the inventor, they resolved on presenting him with a superb service of plate. A subscription of two thousand pounds was immediately formed, a publick meeting was held in the north of England, and, at a dinner given to Sir Humphry, he had the proud satisfaction of receiving the grateful tribute due to his genius and philanthropy. The lamp is now known all over the mining countries by the name of "the Davy;" and time has not in the smallest degree tended to lessen the confidence which was originally reposed in its efficacy as a protector of human life.

STATISTICKS OF CANTON.

Chinese Manners.

We have been sent a copy of a slight volume of about 100 pages published in Canton by Mr. Keating, a countryman of ours. It is a description of the city of Canton, accompanied with an appendix of curious and valuable information, respecting the Chinese Empire, and the habits, manners, &c. of its people. The whole thing is a curiosity, and not the least so among its contents is a map of the city of Canton, executed by a native hand—the writer disclaims the title of "artist" for him. It is a fac-simile of one of the native maps, and exhibits fairly enough a good idea of the extent &c. of the city. We give some information abridged from the contents of the volume.

The foreign factories are situated a short distance from the south-west corner of the city walls. The rivers and canals which abound around Canton are full of fish, and covered with a great variety of boats continually passing to and from the neighbouring villages. Southwards the waters are about one-third of all the district that is visible. Ricefields and gardens occupy the lowlands, with here and there a few hills and small groves of trees to diversify the surface.

More than 4000 years, according to their chronology, Canton was called "the splendid capital;" and about twelve centuries before the Christian era this district first began to pay tribute to the Emperors of China.

In November, 1650, the Tartars took and plundered Canton, and killed all they laid hands upon, the numbers lost during the siege and sack amounting to 700,000; out of the ruins thus made arose the modern city, and the Tartars took up their quarters in the old city, where their descendants still live.

The author estimates the circuit of the wall, including both old and new cities, at not more than six miles English, as he has walked the distance, at a quick step, in little less than two hours. The walls are composed partly of stone and partly of bricks, and great inroads have been made on them by the elements, so as to be able to afford little resistance to a modern foe. They rise nearly perpendicularly, and vary in height from 25 to 35 or 40 feet, and their thickness is from 20 to 25. A line of battlements, with embrasures at intervals of a few feet, are raised on the top of the wall round all the city: these the Chinese call "city men." The city gates are 16 in number, but four lead from one part of the city into the other, leaving only twelve outer gates. A few soldiers are stationed at each to watch them by day and close and guard them by night. The suburbs are nearly as populous as the city itself.

The streets are about 600, and among their names are enumerated "Dragon-street," "Flying-dragon ditto" "Martial dragon," "Golden flower-street," and many more of a similar kind. Several of the streets are long, but most of them short and crooked; in width they vary from two to sixteen feet, and they are flagged with great stones, chiefly granite. The greater part of the visiters, &c. are brought into the city by ditches or canals; these run through and round the city, and are called by the Chinese its "veins," as we say of the Parks that they are the "lungs of London." There are several bridges, some of stone, built over the canals.

With the Chinese, according to Mr. Keating, the left takes precedence of the right as the place of honour, and white instead of black is the appropriate badge of mourning; from the structure of their compass, which they call "a chariot," pointing to the south, they number the cardinal points as in the following verse—"Yue nan pih, yue se tung," "south and north, west and east."

In passing through the streets the spectator is struck with the great difference in the buildings; a few only are rich, and the external appearance of their houses does not at all exceed in elegance those of the middling classes; but the poorer people dwell in most miserable places—mere mud hovels—low, narrow, dark, and uncleanly, and without any division of apartments. "It is surprising that people can live and enjoy health, and even long life, in these circumstances." (Use is every thing no doubt.) "To pass through the streets or lanes of such a neighbourhood is sufficient to reconcile a person to any ordinary condition of life." The general abodes stand close in the streets, and have usually but a single entrance, which is closed by a bamboo screen suspended from the top of the door; there are only three rooms, two for sleeping for the sexes separately, and a common dining room. The rent of one of these houses is four or five dollars a month. The residences of those in easy circumstances are surrounded by a wall 12 or 14 feet high, that rises in front close on the street, giving it a cheerless aspect enough. The houses of a few of the most opulent in Canton are in no respect inferiour, except perhaps, in the space they occupy, to the Imperial Palaces. Very few of the houses or temples have more than one story, and they generally have terraces on the roofs.

A spacious hall, called *Wan Shew Kang*, is dedicated in honour of the Emperor in the capital of every province of the empire. The walls and all the appurtenances of these halls are yellow, the Imperial colour, and annually, three days before and three days after the Imperial birth-days, all the officers of government, civil and military, together with the principal inhabitants, assemble in it and there pay him adoration. The same solemnities are required on these occasions as would be were he present. No seats are allowed in the sacred place, and every one who goes thither takes with him a cushion, upon which he sits cross-legged on the ground.

The police is vigilant and efficient on the whole—they have constables, thief-takers, and a nocturnal watch, who are distinguished by bells; and in winter, when fire is as much to be dreaded as thieves, watch-towers are built on bamboo poles high above the roofs of the houses, thus constituting a double watch. Riotous assemblies are usually quickly dissolved by a rigorous application of the bamboo or whip. Justice is often administered in the most summary manner, particularly in minor offences, where the same hour sees the man apprehended, punished, and set free. The forms of trial are very simple; there is no jury nor pleading. The criminal kneels before the magistrate, who hears the witnesses and passes sentence: he is then remanded to prison or sent to the place of execution. An acquittal is rare. There are four jails, which are called *te-ys*—hell, or literally "earth's prison." All capital offenders suffer just without the southern gates near the river; hundreds die there annually. When brought to the fatal spot, they kneel with their faces towards the Emperor's court, and bending forward in the attitude of submission and thanksgiving, suddenly expire beneath the sword of the executioner.

Mr. Keating attributes the safety as well as the glory of the Chinese empire to its literary institutions, which he calls "the pillars that give stability to the government." All posts except the empire itself are open to, and attained only by literary men, and the most careful publick examinations take place annually in Canton and Pekin; and to qualify the young for these examinations, and thereby prepare them for rank and office in the state, is a leading object of the higher schools and colleges among the Chinese.

Children are not generally sent to school until they are seven or eight years old; they enter usually for a whole year, and whether they attend or not must pay for that time. In every school there is a tablet with the name of Confucius inscribed, with an altar beneath, on which incense and candles are continually kept burning. When the scholar first enters the room in the morning he bows before the tablet and then to his teacher; the last for respect, the first for devotional worship.

Of the population of Canton not more than half are able to read. Perhaps not one boy in ten is left entirely without instruction: the direct reverse is the case with the females. There is scarcely a school for the latter in the whole city.

"The religious institutions of the Chinese present for contemplation a dark and melancholy picture." One of the temples in Canton is called "The temple of glory and filial duty; this is one of the largest, and has 3500 acres of land belonging to it, which are leased out for the support of its inmates, about two hundred in number; it was built two hundred and fifty years after Christ, and has been often repaired and supplied with new recruits of idols, with which it abounds in all its numerous halls. The other temples (there are 124 in all) are full of idols and all manner of abominations; their outer courts the retreats of vagabonds and gamesters, "while their inner apartments are usually inhabited by those miserable beings who, having abandoned society and their better reason too, drag out an ignorant, idle, and misanthropick life." There are several nunneries in Canton, about 100 priests, who are maintained at a great annual expense. Budha is one of their greatest idols, and he is generally made of enormous dimensions, in the attitude of a half-naked, gross, well-fed lounger.

The most celebrated of the temples is the far famed "Hinam jos-house," or temple of Hinam, which was originally a private garden; then "the temple of ten thousand autumns," dedicated to Budha. This is a place of frequent resort for strangers visiting Canton; it occupies altogether about eight English acres; in the great hall are three stately images representing the past, the present, and the future Budha, and here the priests have their daily vespers at five o'clock. The bodies of the priests after death are burned here, and the ashes deposited once a year in a mausoleum set apart for the purpose, and until this annual period comes they are kept in small jars. At present (March 1834) there are about 175 priests in this temple alone.

Besides the 124 publick temples there are a great number of altars dedicated to the gods of the land and of grain, of the wind and clouds, of thunder and rain, and of hills and rivers, &c. At these, as in all the temples, sacrifices and offerings of animals, fish, fruit, sweetmeats, &c. are presented by all classes, publick and private. On the birth-days of the gods and at other times, processions are fitted out at the various temples, and the images are borne in state with musick, flags, and other insignia through the most publick streets. They have three religious creeds, Budhism, Taunism, and the doctrines of Sage.

The charitable institutions are few in number, small in extent, and of recent origin; a foundling hospital for 200 or 300 children, a retreat for poor aged and infirm or blind people, and an hospital for lepers, are the principal if not the only establishments of the kind in existence. A dispensary was attempted, but after a short trial abandoned.

With the exception of the Russian caravans which traverse the northern frontiers of China, and the Portuguese and Spanish ships which visit Macao, the whole trade between the Chinese empire and the nations of the west centres in Canton.

Lon. Globe.

DESTRUCTION OF BOTH HOUSES OF PARLIAMENT.

(From the London Sun.)

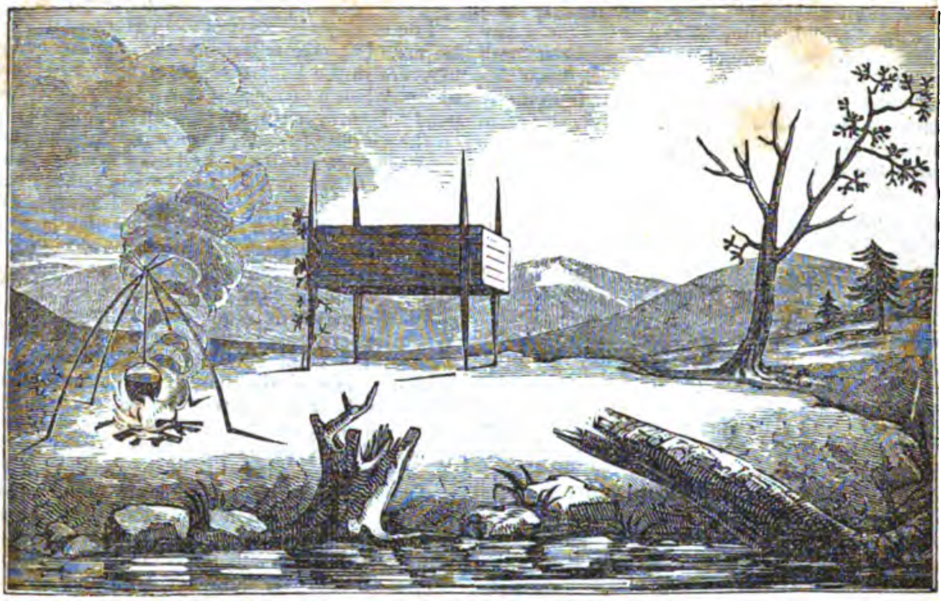
The total destruction of both Houses of Parliament by fire, Oct. 17, will mark the commencement of a new era in the history of England. The future historian, when he comes to this resting place, will suspend his narration to dwell with melancholy pleasure on the glories of which these now smoking ruins were a witness—to recall the hallowed recollections of the triumphs of freedom obtained within those walls, and perhaps to date from the downfall of this venerable pile changes the most momentous which have stamped their impress on the character of a great people. We saw the fire from every point to which an approach to it could be made, and never before did we behold a spectacle so awfully grand—so sublimely terrifick. On Westminster Bridge, and more than a mile beyond it, whither the wind blew for about two hours after the breaking out of the flames, it literally rained fire. The crowds of people who flocked from all directions were immense, and but one feeling of sorrow seemed to pervade the people—all were united in a wish to preserve these monuments of the freedom of Britain—these theatres upon which were acted whatever is greatest, noblest, and most glorious in her past records. Much was done; and to the cheerful and timely exertions of such persons the country is indebted for the preservation of Westminster Hall and the adjoining Law Courts.

It is impossible to contemplate these splendid ruins without feeling that another link which connected the past with the present is broken. Here, within these walls, the most memorable of freedom's battles were fought—Here the great charter of English liberty was first unfolded for the protection of the people—and here an humble member of the house of commons—Hampden—dared to brave the power of a royal despot. Within the now bare, and roofless walls of St. S's Chapel did Wm. Rufus with the nobles of his court, prostrate himself in prayer, and Edward III. give to heaven those hours which were not devoted to the happiness of his subjects. The House of Lords too—the first Legislative chamber in the world—was not without a host of recollections which rendered it an object of venerable respect in the eyes of the country. Here stood Elizabeth, in all the pride of regal triumph, announcing the destruction of the Spanish Armada—whose foundering fleet forms the never-to-be-forgotten needle-work decoration of the lofty walls;—here William III. gave the Bill of Rights to Englishmen; and here the final words were spoken which gave toleration to the Dissenter, emancipation to the Catholick, and freedom to the slave.

The national loss, from the destruction of these edifices, sacred to liberty and the past, cannot be estimated. The books alone destroyed were worth several thousand pounds, independent of hundreds of most valuable records, of which it may take half a century to discover the full extent. For the various reports of the origin of the fire, we refer to the accounts which are given in our other columns. The loss, considered as an ordinary business affair, is estimated at half a million sterling.

A Solar Eclipse occurred on Sunday the 30th day of November last. The disk of the sun was so nearly eclipsed that a slender crescent only was visible. The planet Venus was distinctly seen with the naked eye, the appearance of which through the telescope we are told was crescent, and very similar to that of the sun at the greatest obscuration.

Beginning of the eclipse, at 1 h. 6 min.
Greatest obscuration, at 2 h. 29 min.
Apparent conjunction at 2 h. 30. m.
End of the eclipse at 3 h. 47 m.
Digits eclipsed, 10 deg. 46 min. on the southern limb of the sun.



AN INDIAN CHILD'S GRAVE. Fond du Lac.

Among the most curious and interesting peculiarities of the American Indians, is their methods of disposing of their dead. The modes are different in different tribes, varying according to their religious notions, accidental caprice, or their attachment to the person of the deceased. Among the Esquimaux the corpse is deposited, with the head to the westward, in a sort of coffin formed of loose planks, and placed upon a platform of driftwood, which is sometimes raised to the height of two feet. A hive-shaped covering, made of spars of drift wood put together closely, is erected over this to secure the body from the depredations of wild beasts; it gives way however finally to the rapacity of foxes and wolves. The body is generally dressed in a frock made of eider-duck skins, and covered with hides of deer. Sometimes the coffin and planks are omitted, and the corpse then rests simply on the drift wood. Among some of the tribes of the United States, the dead are buried several feet under ground, with their dresses and all their implements of war and hunting by their side. These things are thrown into the grave in the belief that the deceased will have use for them in the hunting grounds of the other world. Other tribes place them in the earth in an erect posture, all accoutred and prepared for immediate action, which they think will be necessary, soon as the deceased reach the country of souls. Among the Chippeways, one mode of burying the dead, is, to place the coffin, or box containing their remains on two cross pieces nailed or tied with wattap to four poles, as is designed to be represented by the above engraving. The poles are sometimes ten feet high. They plant near these poles, the wild hop, or some other kind of running vine which spreads over and covers the coffin. The reason they give for thus disposing of their dead, is, that they dislike to hasten them out of sight by putting them under ground. That it is a comfort to them to see the box that contains the remains of their departed friends.

The Chippeways declare, that all Indians when they die, go to a large village, towards the setting sun, that has no end to it—Jeebyug-aindahourkee-ewaud, or the country of souls. Some say they get there directly—others have to encamp several nights by the way before they reach it. The Great Spirit however according to their belief, does not live in this great village, but *he lives in the sky*. These notions of the untutored Indian, evidence the universality of Religion; and if men's feelings were not sufficient they prove that the human mind is as prone to religion, as sparks are to fly upward.

JOURNAL OF THE FRANKLIN INSTITUTE

This popular journal continues to be published monthly, under the auspices of the Franklin Institute of Philadelphia. We select the following from the notices of new patents, embraced in the last number, which we presume our readers may read with pleasure and profit.

For colouring Lamp Oil, of different tints, Ezra Bourne, city of New-York, March 4.

To render the oil red, alkanet root is to be put into it, and to remain until the colour is sufficiently deep. For green, verdigris is to be used, grinding it, and allowing it to be rubbed up with a portion of oil; this may be poured into a cask, and the oil eventually strained. Cinnamon and cloves are to be used for a cinnamon colour: the colouring matter being exacted by a mixture of oil and spirits of turpentine. A deeper colour may be obtained by oil of pimento.

The foregoing contains the whole substance of the specification, the modes of colouring not being claimed. From our brass lamps we could have supplied to the patentee a green colouring matter, which we have often thrown away; the colouring of oils by alkanet root, has been done thousands of times, and for ourselves, we had rather use the cloves and cinnamon for other purposes. We can assure the patentee, than an easy mode of depriving oil of all colour, would be an invention much more likely to please the publick than that for communicating colour thereto.

For an apparatus for Curing Smokey Chimneys; Henry Pollock, Baltimore, Maryland, March 11.

The oft told tale of cold air admitted from without, under the hearth, and passing into a space behind the metal back of the fire place, there to be heated, and thence admitted into the room, is here again repeated, without the variations. When the smoking is caused by currents blowing down, a quadrangular sheet iron cap is placed upon the top of the chimney; the top of the cap may be arched, and the smoke escape at each side, whilst two other openings are left below these, "made in the shape of the mouth piece of an organ pipe, and at these the smoke escapes when the current blows down;" or perhaps, it might be best to say, that through these it is intended that the smoke should escape, in the case of a downward current.

For a Substitute for Lamp Oil, denominated Carbonated Alcohol; Samuel Casey, Lebanon, York county, Maine, March 17.

The patentee's recipe is, take one gallon of alcohol and one pint of spirits of turpentine, shake them together, and add half a pound of camphor.

On the 16th of October, 1830, Mr. Isaiah Jennings obtained a patent for a mixture of alcohol and spirits of turpentine, as a substitute for oil. An account of the patent may be found at p. 75, vol. vii. We consider the present as a manifest invasion of the rights of Mr. Jennings, notwithstanding the addition of the camphor. The late fatal accidents resulting from the use of such ingredients in lamps, will, however, probably put a final stop to the use of these mixtures, and we have no doubt that a court of law would now decide that they are not useful, within the meaning of the statute.

We are obliged to agree with the Journal that these lamps as now used are extremely dangerous. But having used them some time, and found them so agreeable a light, and being likewise free from the disgusting smell and filth of oil and candles, we should hardly consent to part with them, until farther experiments had been tried to test *fully* whether they could not be brought safely into use. If the lamps were composed of metal, and managed with prudence, in the filling and use, we think they might be as secure as the ordinary gas lights.

For a Machine for Pegging Boots and Shoes; Nathan A. Fisher, Westborough, Worcester county, Massachusetts, April 3.

The apparatus here patented is intended to cut and drive the pegs into a shoe one at a time, the pegs being made from a strip of wood of the proper length and thickness, and sharpened at its lower edge. A plate of metal, of the form of the sole, is to be fixed thereon, and this plate is to have notches in its edge like saw teeth, to serve as guides for the pegging awl. The instrument with which the holes are to be made, and the pegs driven, consists, in part, of a hollow tube, like a piece of gun barrel, five or six inches long, into which is fitted a punch, or piston, borne up by a spiral spring, and having on its lower end an awl, and a peg driver, at such distance from each other as the pegs in the shoe are to be placed. Although some pains have been taken to describe the machine, we should be unable to construct one from the description given, even with the aid of the drawing. Perhaps, were we to examine the model, the operation might be made plain. The whole appears to be considered as new, no claim being made to any particular part, nor indeed to the general arrangement of the whole.

For a Percussion Pistol Whip; Joshua Shaw, city of Philadelphia, March 17.

A percussion pistol is to be contained in the handle of a riding whip, the construction of it not differing materially from some of the pistols or rifles contained in canes. The thong is fastened to the end of a ferrule that is attached to the whip handle by a bayonet lock, and is to be removed before firing. The percussion cap stands immediately behind the pistol, and the charge is ignited through its centre. The pistol is cocked by drawing back a rod, which passes through the centre of the handle, and has a small button projecting at its head; and the depression of a small knob at the side, effects the discharge. The separate parts are not claimed as new, but the whole in their state of combination, with the variations of which they are susceptible.

For an improvement in the Gridiron; Ami Clark, Berlin, Hartford county, Connecticut, March 28.

This gridiron is to be made round, square, or otherwise, and is to revolve upon its centre, like other revolving gridirons. The bars also, are to be fluted, as heretofore, for the purpose of collecting the gravy; but it is to differ from other gridirons much in the same way in which the kangaroo differs from other quadrupeds, namely, in the relative length of its hind and fore legs, in order to give to the gravy the proper disposition to descend into the receptacle prepared for it. Those cooks who have gridirons with legs of equal length, if any such there be, which we very much doubt, will, we hope, consider themselves as still at liberty to prop them on one side, in any degree which they may find convenient; and should there be in existence such a thing as a gridiron with fluted bars, a trough for the gravy, and hind legs longer than the fore, such as we remember to have seen in those days when a sop in the pan was accounted a great delicacy, it may continue to stand out of the horizontal, without obtaining a new lease.

PEQUOT TRIBE OF INDIANS.

A few weeks since we heard an address from a Mr. Apes an *indian preacher* in Massachusetts soliciting contributions for the purpose of building a teacher's house at Marshpee, Barnstable Co. Mass. where a remnant of this once powerful tribe are settled. He stated that the laws which had hitherto made them slaves, were repealed last winter by the Massachusetts Legislature, and that they now formed a body politick. There are about 500 inhabitants, and they have about 70 houses none of which cost more than $100—100 of them read, and 40 or 50 write. The Bible and spelling book has been translated into their language. They have a church consisting of about 50 members, possess eight teams, thirty cows and a few sheep, and are about putting up a building intended for a school house, and teacher's dwelling. Mr. Apes, who is himself an indian, was of opinion that the American Indians are as capable of intellectual improvement as the whites; and alleged the disadvantages of their condition, their continued ill treatment, and the laws and prejudices of the whites towards them, as the cause of their unequal improvement and their present degraded habits and manners. Is it not incumbent upon philanthropists to devise some method by which the intellectual and moral character of the American Indians may be elevated?

MANUAL ALPHABET.

In laying before our readers a representation of the manual alphabet, respectively in use in Europe and on this continent—which we think may be of practical use to some, and not without interest to many in this country—it seems desirable to explain what they are, to state the purposes to which they are applicable, and to give an account of their origin, so far as it can be ascertained. For the means of doing this, we are considerably indebted to the memoir of the Abbe de l' Epee, in the 'Biographical Contemporains,' and to an article on the subject in a recent number of the 'Magasin Pittoresque.'

The pretensions of the manual alphabet have been much misunderstood and frequently overstated. If we had not met with grave and eloquent essays, which give to dactylology, (a name derived from the Greek, meaning finger-talking,) the power of conducting the dumb to the gradual attainment of speech, we should think it scarcely requisite to state that it is merely a substitute for, or rather, a mode of writing: with no other advantage over the use of pen, ink, and paper, that we are aware of, than this—that the aparatus is always at hand, always ready for use. By the means of the manual alphabet all the words and phrases of conversation can be expressed. To learn it, requires less than half an hour, and the practice of a few days makes the use of it easy and expeditious. With the engravings before him, no person can find difficulty.

In the one-hand alphabet, the letters J and Z are figured in the air; J with the little finger, and Z with the index. In the other the letter H is formed by dashing the palm of the right hand across that of the left. The other characters do not appear to need explanation. It is very unnecessary to mark the points otherwise than by a proper pause in the manual action. But it is requisite that the words should be separated, either by a very slight pause, by a horizontal motion of the hand from left to right, or by a sort of fillip with the finger and thumb of the right hand.

On comparing the two alphabets, we find that the object of both is to represent, as nearly as possible, the usual forms of the letters—the double-handed alphabet imitating the capitals, the other the small letters. The single exhibits an anxiety not to require the help of the left hand; and the other is unwilling to dispense with its assistance. The single tortures the fingers in order to screw them into some fancied resemblance to the written character; and we see that, after a lame attempt to form X with one hand, it admits another formed with two, as a variety. The other often chooses to do with two hands what one would do better; so to match with the X in the single alphabet, there is Q in this. A very good letter is formed with one hand, but a variety is introduced as if to show that it could be done with two. C and J remain the only letters which two hands could not be made to represent; and the former is the same in both alphabets. The highly anomalous and awkward variety of Z seems to have been devised for no other reason than to obtain a resemblance to the written form. We are disposed to consider that, taking either one or both hands throughout, forms much more easy might be devised if the object of resemblance were altogether relinquished. But taking them as they stand, the characters made with two hands are much more distinct, and more easy to form and decipher than the other. There is also this advantage in the two-handed alphabet, that it presents the only conceivable mode of communicating with the deaf in the dark; for the characters being formed *by* one hand *upon* the other, it is only necessary with the right hand to form the letters upon the left of the person addressed. Mr. Watson, Principal of the Kent Road Asylum, England, says, that the pupils in that institution, who have sufficient knowledge of language to use the manual alphabet at all, can, in this manner, converse with great facility by night.

Although the two-handed alphabet is much the best known in England, our information concerning the other is far more distinct. The latter certainly came from Spain, where also the art of instructing the deaf and dumb seems to have originated. The subjects are, indeed, so much connected, that it would be useless to attempt to keep the consideration of them separate. It is a vulgar mistake to assign a French origin to those useful arts. The Abbe de l' Epee could well afford to spare the honour of the original discovery, if the assertion of an eloquent writer be true, that 'He is not the first discoverer of any art who first says the thing; but he who says it so long, and so loud, and so clearly that he compels mankind to hear him.' Of the manual alphabets the Abbe certainly was not the inventor: and the impression that he was such may perhaps have arisen from the circumstance that his tomb-stone, in the cemetry of Pere la Chaise, at Paris, bears the figure of an open hand.

If it were not also ascertained that the art of instructing the deaf and dumb originated in Spain, our knowledge that manual alphabets were first known in that country might have led to the supposition that they were originally designed for the purposes of secret communication. But our better information allows us to assign to the invention a benevolent and useful object: as it is known that this mode of communication entered into the system by which the dumb were taught to speak.

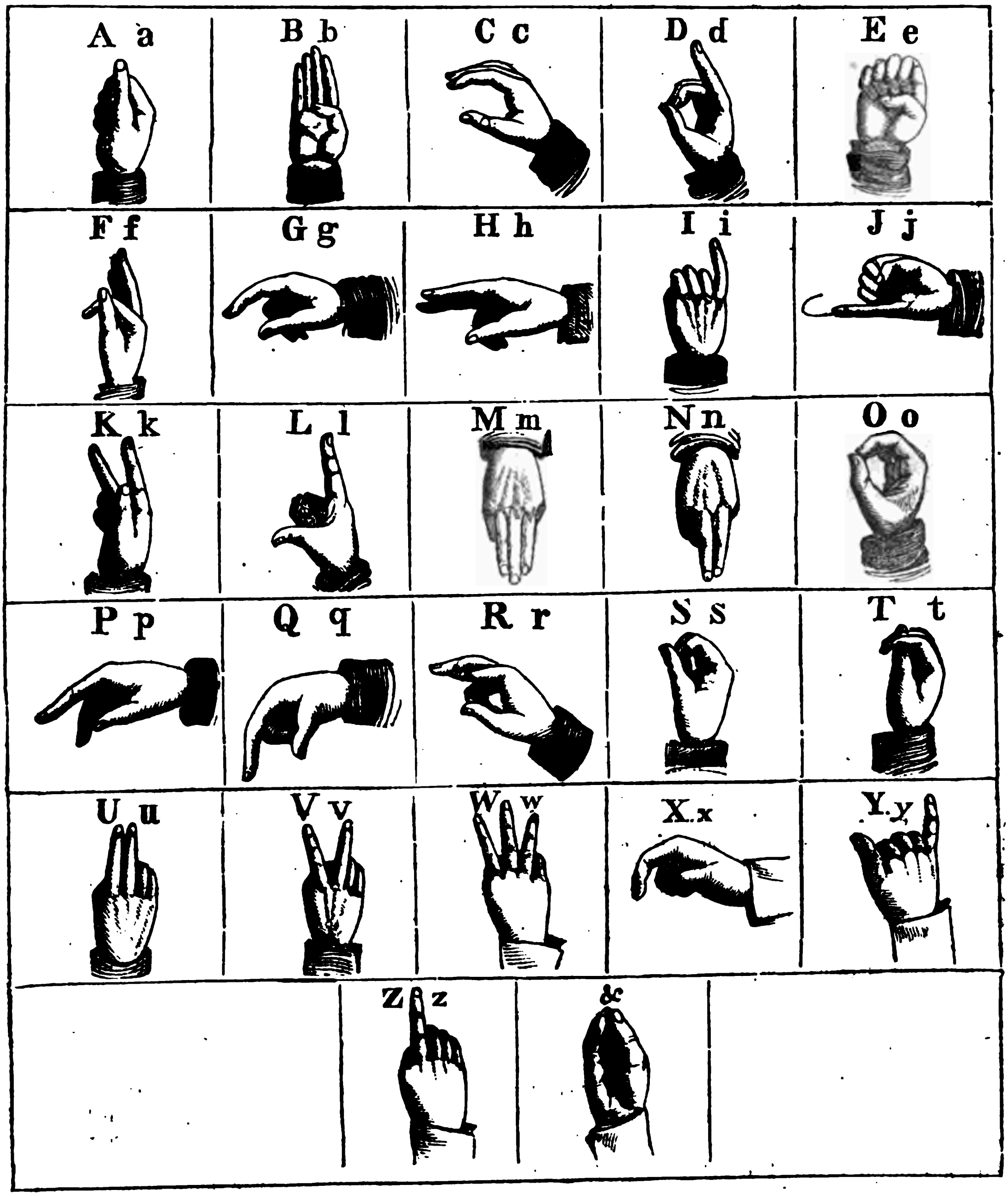
Father Ponce, a Benedictine monk of the monastery of Ona in Spain, who died in 1584, appears to have been the first who exercised the art of instructing this unfortunate class of beings; but we are unacquainted with his method. Don Juan Paolo Bonnet published in 1620, a book in which he developed the principles by which he had been guided in the education of the constable of Castille, who had become deaf at four years of age, but who, under Bonnet's instruction, learned to speak his native language with much distinctness. Bonnet was emulated—it is not clear we should say imitated—by Digby, Wallis, and Burnett, in England; Ramirez of Cortono; Petro de Castro of Mantua; Conrad Amman, a Swiss physician practising in Holland; Van Helmont, and many others.

It appears strange that, notwithstanding this, the possibility of instructing the deaf and dumb seems to have been so little suspected in France, that Don Antonio Pareires, who settled in Paris about the year 1735, was encouraged by the general ignorance to claim the honour of the discovery for himself. He made a great mystery of the means he employed; but his claim was allowed by the Academy of Sciences. Some years after another professor of the art, one Ernaud, set up a rival claim, published a book, and solicited and obtained from the Academy the same honour which had been granted to Pareires. It seems that under all the systems of instruction previous to that of De l'Epee the pupils were considered to have attained perfection when they had been brought to pronounce with more or less facility, and often with much pain and difficulty, a certain number of phrases; and in obtaining this result, the finger-alphabet was much employed by the teachers of the Spanish school.

The one-handed alphabet seems to be particularly distinguished as the manual alphabet of the Spaniards. It is said to have been introduced into France by Pareires; and the Abbe de l'Epee is stated to have borrowed it from him, having only before known the two-handed alphabet. But another account, which, as the most authentick, we shall give, declares that the Abbe obtained a knowledge of the alphabet from a Spanish book.

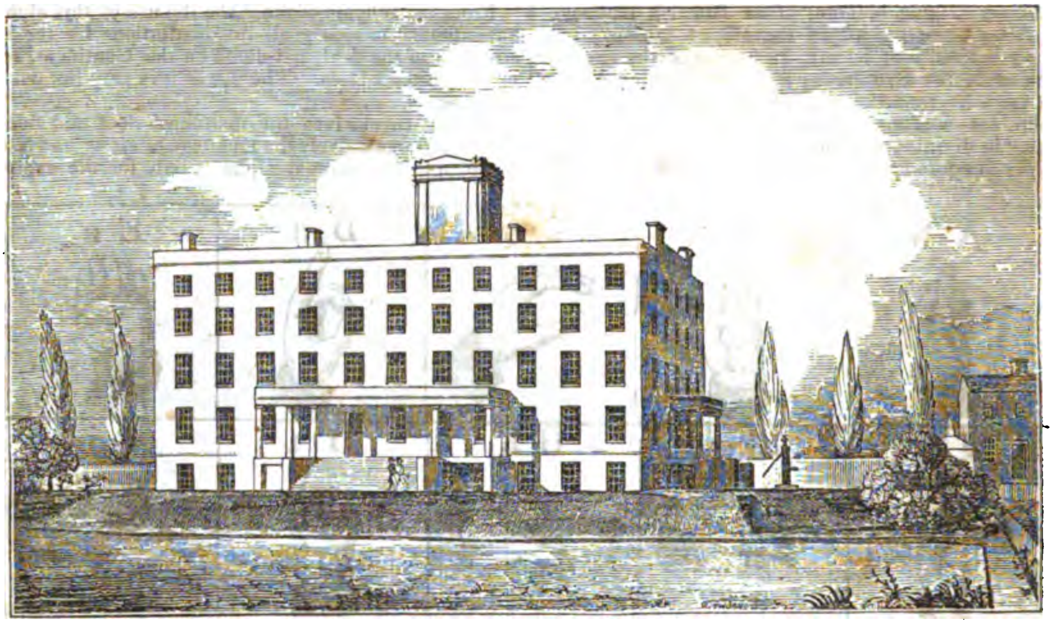
On one of the days which the Abbe was in the habit of employing in the instruction of his pupils, a stranger came and offered to his acceptance a Spanish book, with the assurance that a knowledge of its contents would be of much service to him in his laudable undertaking. Being ignorant of the Spanish language, the Abbe at first declined the offered present; but, having opened it at hazard, he perceived the manual alphabet of the Spaniards; and then turning to the title page he read the words—*Arte para ensemar a hablar los mudos.* 'I had no difficulty,' says the Abbe, 'in divining that this signified *the art of teaching the dumb to speak;* and from that moment I determined to learn the language, that I might be of service to my pupils.'

From the schools of the Abbe the use of this alphabet extended to nearly all the institutions for the instruction of the deaf and dumb on the Continent, and in the United States. The use of it is very limited in England.



Among themselves the instructed deaf and dumb use almost exclusively the language of *signs*, and have recourse to the manual alphabet only for the expression of proper names, or of such technical words as have not yet been characterized by a specifick sign. But in communicating with those who are unacquainted with their system of signs, they habitually use the alphabet. In conversing thus with them it is not always necessary to form entire phrases. The principal words suffice to fix the attention; a natural gesture completes the thought. Yet it must be admitted, that, in the endeavour to catch ideas which are only partially expressed, they are often exposed to very curious and sometimes to very provoking mistakes.

It seems almost incumbent on those who have any intercourse with the deaf and dumb to acquire this useful and simple art.



NEW YORK INSTITUTION FOR THE INSTRUCTION OF THE DEAF AND DUMB.

This charitable institution was incorporated in April 1817. It was projected the year before, 'in consequence,' says Dr. Akerly, 'of a letter written by a dumb person in Bordeaux, offering to come to this country to establish a school.' Two other institutions of the kind had been established previously in this country, the American Asylum at Hartford in 1815, and the Pennsylvania Institution incorporated in 1821. But these were deemed inadequate to the wants of the country in this respect, it having been ascertained that a very large number of deaf mutes existed in this state alone, without competent instruction. Under the above mentioned act, a school was opened in 1818, which, in consequence of employing teachers inadequate to the task they undertook, languished for years in a very unpromising condition. An asylum fund had been created however, by the State Legislature, and in 1829 the present building was erected at the expense of about $31,000, defrayed by the State and private donations. A radical reformation in the government and methods of instruction, in the institution, took place in 1830. Mr. Vaysse was obtained from the institution of Paris to act as instructer; and Mr. Peet, previously an instructer for nine years in the Asylum at Hartford, accepted the situation of principal, which he continues to fill. They brought with them the methods and the signs in use at Paris and at Hartford. 'As a natural consequence,' observes Mr. Barnard, 'the institution assumed a character which it had never before possessed, and immediately won for it anew the confidence, which had before been partially withdrawn.'

This institution is situated on an eminence distant three and a half miles north of the City Hall, a few yards west from the Harlem Rail Way. The ground occupied by the building, and about one acre immediately adjacent, is the property of the institution; it having been granted by the City Corporation. The institution holds a lease of nine acres of land immediately adjoining, also from the Corporation. The main building is constructed of brick and stuccoed in imitation of marble. In the dimensions of its ground plan it is 110 feet by 60. In elevation it embraces five stories, including the basement, and has an observatory upon the roof. Its rooms are spacious, and symmetrically and conveniently arranged; and always with a view to preserve as distinct and independent of each other as possible, the male and female departments. A dining room 60 feet by 30 is situated in the basement. Immediately over the dining room is the Chapel, divided from a school room of equal dimensions with itself, by the main passage through the building. The upper rooms are occupied as dormitories. There is a laboratory in the basement, and a cabinet, library and bathing room on the main floor.

In one end of the building is a sitting room for the use of all in common, sitting rooms for the teachers, and a separate room for the male pupils; at the other end the principal and his family are accommodated with apartments, and on the second floor is a distinct sitting room for the female pupils.

'The internal organization of the establishment, says one of the Reports, 'may be considered as resolving itself into three principal divisions; to wit, education, government and domestick economy.' These are all under the control of the principal, who is accountable to the board of Directors.

Under domestick economy is embraced whatever relates to the physical wants of the pupils. These are amply supplied, and all suitable provision is made to promote the comfort and happiness of the pupils male and female.

The government is for the most part parental and preventive; that of the females is vested in a matron.

Education is physical, mechanical, intellectual, moral and religious. In their physical education those exercises are encouraged which tend to give elasticity and vigour to the muscular system, to procure a proper development of its powers, and which have the most salutary effect in the general formation of the animal man. In an institution for the deaf and dumb, the mechanical education of the pupils is of very high importance. Necessitated, as most of them must be, to depend upon the labour of their hands for subsistence, it would but half discharge its duty towards them, should it suffer them to leave it without some species of knowledge, which could be turned in this way, to immediate account. In the New York Institution a choice is offered between five occupations, viz.: cabinet making, tailoring, shoemaking, gardening and book-binding.*

The male pupils are engaged in some one of these occupations, about four and a half hours daily, under the superintendence of skilful workmen. The building appropriated to the purpose is situated a few yards east of the main edifice. The female pupils, in the mean time, are employed, under the direction of a seamstress, in sewing, knitting, &c. or under that of the matron, in light household affairs, with the proper management of which, it is essential that they as well as all other more fortunate young ladies should become acquainted.

The intellectual cultivation of the deaf and dumb, through the medium of written language, is by far the most difficult task that falls within the plan of the institution. The method of instruction consists in teaching written language by means of signs. Of course it becomes the province of these signs to express the meaning of words, to explain the construction of sentences, and generally to describe those circumstances and events usually imbodied in written language. Isolated as the unfortunate deaf mute is at first from the world of letters, incapable of receiving knowledge through one great ordinary source, the ear, and deprived of the means of communicating with his fellow beings, by those symbols universally intelligible among them, conventional, spoken language, how difficult seems the task of enlightening that mind, literally pent up in a prison house of clay, and of bringing it even near upon a level with those whom God has blessed with the ordinary resources of knowledge! But that benevolence whose aim is ever to equalize the privileges and the happiness of the whole human family with its gladdening light, has penetrated the gloom that hung around the desolate life of the deaf and dumb, and opened up to his glad eyes the avenues of knowledge. It has set him down in a path which he may follow to wisdom, and explained to him the glories of immortality and the ways that lead to its inheritance.

In the methods of instruction, generally, we believe the New-York Institution follows those pointed out by the Abbe Sicard. The system of methodical signs however which were early in use in this institution have been gradually abandoned. Methodical signs, are the representatives of a group of colloquial signs defining or illustrating some word, and are abbreviated from this group; they are sometimes called *signs of reduction*. This institution found them less simple, and less adapted to the purposes of rapid execution, than even alphabetick dactylology. The means, on which the principal reliance is now placed, are the language of action, so far as it is in familiar use, writing, symbolick grammar,* design, and alphabetick dactylology or the manual alphabet. In the manual alphabet, but one hand is employed. The institution has been for some time contemplating the introduction of articulation and the labial alphabet. The experiment is unquestionably practicable; and if we are rightly informed a class has been already established in which the principal is testing its practicability. He may derive encouragement from the fact, that in nearly all the European institutions, articulation and the labial alphabet are now taught; and it is stated that religious exercises are there no longer conducted by signs; but publick prayers are daily articulated in the presence of the pupils.

A course of lectures has been established in this institution within a year or two past, which has been attended with gratifying success. The lectures are given three evenings in a week, and the lecture room is sought with avidity by the pupils, who seem to appreciate the benefits of this enlargement of their sphere of knowledge. The departments of investigation embrace the following subjects: 1. Those branches of science which treat of nature, and of which the object is to discover the properties and relations of all bodies. 2. Description of the mineral, vegetable and animal kingdoms. 3. Rise, progress and present condition of the arts, commerce and agriculture. 4. Geography, physical and political. 5. History, ancient and modern, sacred and profane. 6. The science of government. The lectures are conveyed by signs, and illustrated by means of a black board or Welch slate, and when necessary, by philosophical apparatus. Each lecture is reduced to writing in order that the subject matter may be referred to, and studied by the pupils at their future convenience.

The moral and religious education of the pupils, constitutes a distinct department. 'No opportunity is suffered to escape, of impressing upon the mind of the pupil his duty to his Maker, and to his fellow men:

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*Lithography has likewise been proposed, and we think the teaching of the art might be wisely adopted by the Institution. The art is by no means difficult; and such deaf mutes as have a genius for drawing, by reason of their being able to give a more undivided attention to study than those who have listening ears and talking tongues, we think they might easily perfect themselves in this useful and elegant art, which would soon furnish them with lucrative employment.

* The introduction of *grammatical symbols* into the plan of instruction in this institution, is highly spoken of as a very important auxiliary in the instruction of language. The N. Y. Commercial Advertiser in reference to it, thus observes;—"The characters of which it consists denote not merely the different parts of speech; but they likewise undergo systematick modifications corresponding to the inflections of language, and bearing a strong analogy in idea to the modifications of meaning attendant upon those inflections. They exhibit thus nouns and pronouns in their several cases, adjectives in the different degrees of comparison, and the verb in all its varieties of form, whether as transitive or intransitive, active or passive, past, present, or future, affirmative, conditional, hypothetical, or imperative, or in the infinitive or participial forms. This system is very readily comprehended by the pupils. It is in fact ideographick, and the simplicity of its fundamental principles renders it very easily explicable to any person who will devote a few moments to its examination.

and the word of God is constantly referred to as the basis of every moral precept. Morning and evening prayer, and religious worship on the Sabbath are conducted in the language of signs.'

Among other instruments of instruction besides those before enumerated may be mentioned stenography, mimography, and syllabick dactylology. Stenography has not as yet been fairly tested. Mimography, which is a species of ideographick writing, representing signs of action, has been, we believe, introduced into but one institution, viz. that directed by M. Peroux, of Nancy. Syllabick dactylology is the art of spelling words by means of consecutive positions of the fingers, corresponding to written syllables. We are not aware that this is used in any existing institution. Alphabetick dactylology however is in all but universal use: and there exists but a single sign dialect in the schools for the deaf and dumb on this continent. We subjoin the following table, which is said to constitute a general summary of the present state of the art of instructing deaf mutes.

- Instruments of Instruction.
  - Directly representing ideas.
    - Signs of action.
      - Colloquial.
      - Methodical.
    - Mimography: the language of action reduced to writing.
    - Design.
    - Grammatical symbols.
  - Representing words.
    - Writing.
      - Alphabetick.
      - Stenographick.
    - Dactylology.
      - Alphabetick.
      - Syllabick.
    - Books.
    - The oral alphabet.
    - The labial alphabet. } In conjunction.
- Matter.
  - Language.
    - Its import,
      - Nomenclature.
        - Simple, embracing words.
        - Complex, " Phrases.
        - Tropical, " figurative expressions. } Isolated.
      - Discourse.
        - The same elements. } In combination.
    - Its philosophy.
      - Classification of words.
      - Forms of inflection, or etymology.
      - Principles of construction, or syntax.
  - Subjects of knowledge.
    - Literature.
    - Science.
    - The useful and elegant arts.
    - History and geography.
    - The usages of society.
    - Morals and Religion. } The amount dependant upon the capacity of the pupil, and the time devoted to instruction..
- Processes.
  - Familiar.
    - Indicative: applicable to present objects.
    - Descriptive: " absent " } Confined to the material world.
    - Illustrative.—The use of examples.
    - Metaphorick—The use of figurative action
  - Philosophick.
    - Inductive: analysis, the burden being thrown upon the learner.
    - Explicative—Definition.
      - Direct.
        - a priori: synthesis.
        - a posteriori: analysis.
      - Indirect.
        - By exclusion.
        - By contrast.
  - } Applicable to intellectual and moral notions.

It is to be regretted that no work has been written, no general and well defined plan proposed, not even a system of elementary lessons which might be dignified with the name of standard, has been published in this country, notwithstanding the art has been taught among us upwards of twenty years. The methods of instruction in the several institutions in this country, are extremely disuniform and various. The course which each pursues is independent of the other, and is regulated by temporary convenience, or the various results of the speculative inquiries of new teachers, who seem rather to rely upon their own experience than to follow systems generally adopted. The truth is, the method of instructing these unfortunate children of unindulgent nature, is founded upon philosophical principles, and those principles are as susceptible of explication, and a reduction to a uniform system which would be equally applicable in all institutions, as are any other principles that relate to the philosophy of mind. We do not perceive why it would not be practicable to have a congress of teachers, or at least some conference between the institutions in this country, in order to devise some general plan of instruction, that ultimately might become uniform and established.

To teach this important and interesting, but difficult art, requires a greater practical knowledge of metaphysicks, a more profound investigation, a more philosophical acquaintance with language, and a more thorough intellectual discipline, on the part of the instructer, than is required in any other branch of education. This, in connexion with the truly unfortunate condition of the deaf and dumb, should afford a two-fold impulse to all, to extend the hand of charity and encouragement to those benevolent institutions. And while the Federal Government boasts its liberal policies, its attention as a sacred duty should not be averted from these laudable charities most singularly worthy of its liberality and fostering care.

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*The whole number of pupils authorized to be educated at the expense of the State, is 120, and the annual provision for their instruction, is $14,400. The number authorized to be instructed at the publick expense at the New York institution is 96. The expense of board and tuition, is $130 each per annum, making a yearly expenditure of $12,480. The whole number of deaf mutes receiving instruction in the State in January last was 168—34 at Canajoharie, and 134 at New York. The number at the New York institution, now, probably exceeds 150. The term of education is five years.

THE DESTRUCTION OF POMPEII.

In our last number we presented our readers with a matter of fact description of the singular disappearance of Pompeii. We now give a description from the "Last days of Pompeii," by Bulwer, whose gorgeous imagination, strong powers of conception and exuberant fancy enable him to throw a thrilling interest around almost every scene he undertakes to describe. This scene, as connected with the *denouement* of his tale, and interwoven with its incidents, is developed with peculiar power and effect—we extract from the chapter entitled "The Progress of the Destruction."

The cloud which had scattered so deep a murkiness over the day had now settled into a solid and impenetrable mass. It resembled less even the thickest gloom of a night in the open air than the close and blind darkness of some narrow room.* But, in proportion as the blackness gathered, did the lightnings around Vesuvius increase in their vivid and scorching glare. Nor was their horrible beauty confined to the usual hues of fire; no rainbow ever rivalled their varying and prodigal dies. Now brightly blue as the most azure depth of a southern sky—now of a livid and snakelike green, darting restlessly to and fro as the folds of an enormous serpent—now of a lurid and intolerable crimson, gushing forth through the columns of smoke, far and wide, and lighting up the whole city from arch to arch,—then suddenly dying into a sickly paleness, like the ghost of its own life!

In the pauses of the showers, you heard the rumbling of the earth beneath, and the groaning waves of the tortured sea; or, lower still, and audible but to the watch of intensest fear, the grinding and hissing murmur of the escaping gases through the chasms of the distant mountain. Sometimes the cloud appeared to break from its solid mass, and, by the lightning, to assume quaint and vast mimicries of human or of monster shapes, striding across the gloom, hustling one upon the other, and vanishing swiftly into the turbulent abyss of shade; so that, to the eyes and fancies of the affrighted wanderers, the unsubstantial vapours were as the bodily forms of gigantick foes,—the agents of terrour and of death.†

The ashes in many places were already knee-deep; and the boiling showers which came from the steaming breath of the volcano forced their way into the houses, bearing with them a strong and suffocating vapour. In some places immense fragments of rock, hurled upon the house-roofs, bore down along the streets masses of confused ruin, which yet more and more, with every hour, obstructed the way; and, as the day advanced, the motion of the earth was more sensibly felt—the footing seemed to slide and creep—nor could chariot or litter be kept steady, even on the most level ground.

Sometimes the huger stones, striking against each other as they fell, broke into countless fragments, emitting sparks of fire which caught whatever was combustible within their reach; and along the plains beyond the city the darkness was now terribly relieved; for several houses, and even vineyards, had been set on flames; and at various intervals the fires rose sullenly and fiercely against the solid gloom. To add to this partial relief of the darkness, the citizens had here and there, in the more publick places, such as the porticoes of temples, and the entrances to the forum, endeavoured to place rows of torches; but these rarely continued long; the showers and the winds extinguished them, and the sudden darkness into which their sudden birth was converted had something in it doubly terrible and doubly impressing on the impotence of human hopes, the lesson of despair.

Frequently, by the momentary light of these torches, parties of fugitives encountered each other—some hurrying towards the sea, others flying from the sea back to the land; for the ocean had retreated rapidly from the shore—an utter darkness lay over it, and upon its groaning and tossing waves the storm of cinders and rock fell without the protection which the streets and roofs afforded to the land. Wild—haggard—ghastly with supernatural fears, these groups encountered each other, but without leisure to speak, to consult, to advise; for the showers fell now frequently, though not continuously, extinguishing the lights which showed to each band the death-like faces of the other, and hurrying all to seek refuge beneath the nearest shelter. The whole elements of civilization were broken up. Ever and anon, by the flickering lights, you saw the thief hastening by the most solemn authorities of the law, laden with, and fearfully chuckling over, the produce of his sudden gains. If, in the darkness, wife was separated from husband, or parent from child, vain was the hope of reunion. Each hurried blindly and confusedly on. Nothing in all the various and complicated machinery of social life was left, save the primal law of self-preservation!

Nearly seventeen centuries had rolled away, when the city of Pompeii was disinterred from its silent tomb,* all vivid with undimmed hues; its walls fresh as if painted yesterday,—not a hue faded on the rich mosaick of its floors,—in its forum the half-finished columns as left by the workman's hand,—before the trees in its gardens the sacraficial tripod,—in its halls the chest of treasure,—in its baths the strigil,—in its theatres the counter of admission,—in its saloons the furniture and the lamp,—in its triclinia the fragments of the last feast,—in its cubicula the perfumes and the rouge of fated beauty,—and every where the bones and skeletons of those who once moved the springs of that minute yet gorgeous machine of luxury and of life!

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* Pliny.

† Dion Cassius.

* Destroyed A. D. 79—first discovered, A. D. 1750.

SKETCHES OF THE BRITISH COLONIES.

The following "sketches of the British Colonies" we extract from the Liverpool Times. This is the first of a series of articles which that paper designs to lay before its readers, on the very interesting subject of the extent of the empire under the control of England. If possible, we shall avail ourselves of the articles as they reach our shores, and lay them regularly before *our* readers, confident that they will find extraordinary interest in the description of colonies comprising 1,100,000 square miles, and upwards of 200,000,000 of souls, all embraced under the government of one king.

The publication of Mr. Montgomery Martin's valuable History of the British Colonies brings together and places before the publick for the first time, in a condensed form, a vast number of facts relative to the dependencies of this country, in every part of the globe, which previously could only be learnt by the perusal of the almost innumerable volumes of voyages, travels, and other works of a similar kind. We have on former occasions expressed the high opinion which we entertain of the two volumes already published, and we now purpose to make use of them as the ground work of a few brief, but, we hope, comprehensive sketches of that immense colonial empire scattered throughout every quarter of the globe, over which the colours of England constantly wave, and on which it may be said more truly than of the former empire of Spain, that the sun never sets in his course.

Following the plan of Mr. Martin, we commence with the extensive British possessions in the East Indies, extending from the rivers of the Punjab to the Straits of Malacca, and from the snowy mountains of the Hymalaya to the Island of Ceylon. This immense tract of country includes the four presidencies of Bengal, Agra, Madras, and Bombay; the provinces beyond the Ganges conquered from the Burmese; the Island of Ceylon, and the settlements of Penang, Malacca, and Singapore. Its total area is five hundred and twenty-one thousand seven hundred and ninety-two square miles; its population ninety-six millions and seventy-six thousand native, and sixty-six thousand white inhabitants; its revenue eighteen millions four hundred and fifty-one thousand pounds sterling; the military force which it supports upwards of two hundred and thirty thousand strong, and its exports and imports more than fourteen millions per annum. This empire, which is ten times as large as England, is held directly by the British authorities, whilst another empire, including upwards of six-hundred thousand square miles, and a hundred millions of inhabitants, though nominally independent, and under the rule of the native princes, is in reality as much under the control of England as the ceded and conquered provinces. The total area of the empire governed and controlled by the British is upwards of eleven hundred thousand square miles, and its population not less than two hundred million souls! The Spanish colonies in North and South America, though covering a larger area, never, in the height of their glory and prosperity, contained the fourth part of the population of our Indian empire.

INDIA WITHIN THE GANGES.

The British possessions on the Continent and within the Ganges consist of the four presidencies of Bengal, Agra, Madras and Bombay, each of which we shall briefly describe, beginning with

The Bengal Presidency, which includes the provinces extending along the banks of the Ganges, from the dreary Sunderbunds at its mouth to the point where it quits the newly-formed presidency of Agra on the west. This presidency, the scene of Lord Clive's early victories, is the richest and most thickly-peopled part of British India. It comprises the whole of the province of Bengal proper, a vast and monotonous region, whose immense alluvial plains, covering one hundred thousand square miles, are scarcely diversified by a single hill of any height, except to the east of the Brahmaputra. This region, irrigated by innumerable rivers, and subject in the spring and winter seasons to deluges of rain, teems with life and fertility, and produces luxuriant crops of rice, indigo superiour to that of any other part of India, sugar, now neglected, but capable of great improvement, cotton, tobacco, opium, and every other kind of tropical produce. The shores of the bay of Bengal are fringed with the graceful cocoa-nut palm, whilst the nutmeg, camphor, and pimento grow richly in the botanical garden at Calcutta, and are capable of being cultivated in all parts of the province. Coal is found in abundance in the Burdwan district, and is used in steam navigation, which promises in a few years to produce a wonderful social revolution along the shores of the numerous rivers of India. The climate of this rich province is oppressively hot, men and beasts having been known to fall dead in the streets of Calcutta in the months of April and May. From seventy to eighty inches of rain falls during the year, that is about double the quantity that falls in England, and it descends in torrents; and such is the fertility produced by the intense heat and abundance of moisture, that all the cultivated land yields prodigious crops, whilst those which are neglected are covered with a rank and noisome vegetation. The inhabitants of Bengal are mild and timid, but patient and industrious. For ages they have been subject to the tyranny of their Mahommedan conquerours, and now, for the first time in their long and disastrous history, possess a just and equitable government, protection for their property, and security for their lives. The province of Bahar, higher up the Ganges, has a more diversified surface than Bengal. To the north it extends in long and wide plains, but to the south it is varied by hills and dales, especially in the Rajemal district, where the hills form some of the first scenery on the banks of the Ganges. This province produces great quantities of saltpetre, and indigo is also extensively cultivated. Much of it lies waste, and is covered either with thick jungle or majestick forests. The Ganges, at this distance from the sea, is from three to five miles broad. Ascending the river, we come to the rich province of Allahabad. Here the country is much bolder and more picturesque, and very fine wheat is grown. In the district of Glazepoor millions of roses are cultivated, for the purpose of making attar of roses. Two hundred thousand flowers are required to make the weight of a rupee of attar. The British provinces of Berar to the south are wild, ruggid and hilly, full of deep jungles and impassable ravines, among which the Nerbudda river takes its rise. These provinces cover an area of fifty-five thousand nine hundred square miles, but large districts are unexplored by the British, and little known to the natives. The Malwah territory, belonging to Britain, occupies upwards of eight thousand square miles. It is situated on an elevated plain, two thousand feet above the level of the sea, diversified by hills, and watered by numerous streams, which flow over a rich and fertile soil. It is peopled by the warlike, crafty, and restless Mahrattas.

The total extent of the Bengal presidency is one hundred and fifty thousand square miles, and its total population forty millions of souls.

Agra is the second presidency of continental India, and has been recently separated from that of Bengal. It consists principally of the provinces of Agra and Delhi, celebrated as the seats of the Mogul Emperors of India, and of the province of Kumano, amongst the Hymalaya mountains. It is well watered by the Ganges and other rivers, produces wheat in abundance, possesses in general a fertile soil, a mild and temperate climate, and a bolder and more warlike race of men than Bengal or the lower provinces. The Mahommedans here preponderate in influence, if not in numbers. Delhi, for so many years the Mogul capitol, is greatly decayed; and Agra, also a capitol of the former rulers of India, still more so. The Great Mogul still reigns, though as a mere puppet in the hands of the English. Lodeana, on the frontiers of Runjeet Singh territory, is the most westerly fortress in the hands of the English. It was within this presidency that the sanguinary campaigns between Halkar, Scindia and Lord Lake took place.

This presidency contains eighty-eight thousand square miles, and thirty-two millions of inhabitants, of whom not more than five thousand are Europeans

Madras, the third presidency, formed from the dominions of the Nabob of Arcot, the former French possessions in the south of India, the provinces wrested from Heyder Ali and Tippoo Saib, and the southern territory of the Mahrattas, stretches along the eastern and western shores of India for many hundred miles. The Coromandel coast is in general flat and sandy, whilst that of Malabar is bold and romantick, presenting every where the richest scenery. The two chains of the Ghauts run through this presidency. They are connected by the Neilgherries, a beautiful and healthy range of hills, recently explored, but already greatly frequented by Europeans, on account of their mild and salubrious climate, and their charming scenery.

This presidency contains one hundred and forty thousand square miles, but not more than fourteen millions of inhabitants.

Bombay, the last of the four presidencies, includes the north and south Coucan, and the districts of Surat, Croach, Ahmedabad and Keira, on the Indian Ocean, and the inland provinces of Poonah and Kandeish. The face of this presidency is greatly varied, consisting of fertile plains and valleys, separated by mountainous chains, and watered by majestick rivers. Much of it is forest and jungle, and the inhabitants of several districts are wild and recently subdued. The collectors of Poonah and the district of Candeish are, however, full of beauty and fertility.

The extent of this presidency is sixty-four thousand nine hundred and thirty-eight square miles, the population eight million souls.

THE STUDY OF THE ENGLISH LANGUAGE.

Our labours in the instruction of the deaf mute first led us to see clearly a truth, for which we had long been groping, when we were expected in ordinary schools to 'transfuse' the theories and rules of Murray into the brains of boys, with all the pompous array of names by which the branches of instruction are designated. Spelling, Reading, Defining, Grammar, and Composition, Etymology, Syntax, and Prosody, mean nothing more than 'the study of the English Language.' It is a false refinement, in our view, which has thus divided a simple and comparatively easy and interesting study into several dry and difficult branches, each one of which sometimes costs more labour than the whole actually requires, when pursued in a simple method. After attempting to pursue this same artificial course with the deaf mute, and finding it insupportably wearisome, and absolutely stupifying to the intellect, the simple plan of nature was adopted. The pupil was taught to write sentence after sentence, was told the meaning of the words in a simple phrase, the mode of spelling them, and their proper order, and was required to write a new phrase composed of the same words, and thus like the gentleman who had 'spoken prose all his life without knowing it,' these ignorant deaf mutes were soon familiar with Spelling, Reading, Defining, Grammar and Composition; and attained a degree of accuracy which surprised all who witnessed it, without being aware of the number of their studies.

On visiting the best schools of Switzerland we found this same plan adopted. A class of little boys were called upon to *speak* a phrase; they were taught *orally* to spell the words which composed it: they *wrote* it, and thus spelled it again: they were then called upon to *read* it; and to repeat it, and to spell the words again: and then to speak and write a *new phrase*, and to explain the words. On this plan, while these simple children only supposed they were learning German, or rather learning to express their thoughts, they were acquiring five distinct studies besides Chirography! And they acquired them in *fact* and not in name. We received a letter from a boy of nine years of age, taught in this manner, which surpassed in all its characteristicks those of our schoolmates at fourteen years of age, and some of those of our fellow students at college.

We ought to add, that in this mode of instruction, where the examples of a particular inflection or combination of words became sufficiently numerous, the pupils were taught to remark the general form or principle which pervaded them, and thus imbibe, imperceptibly, all the theory of language which the young or ignorant can comprehend.

We leave our readers to decide which plan is the most rational and simple. We will only assure them, that so far as our observation has extended, this produces greater accuracy in far less time than the ordinary course. We beg them to recollect the key to all just views on this subject—that language was established before grammarians or lexicographers existed—that its rules and principles are to be found in the practice of the best writers, and that the study of these is the best mode of learning them practically. Our best writers are formed by the study of our best authors.

Annals of Education.

EXHIBITIONS.

ZOOLOGICAL INSTITUTE.

The splendid establishment of this name, now open to the publick at No. 37 Bowery, is well worth the visits of every lover of Natural History. In the neatness and convenience of the interiour arrangement, and the variety and beauty of the animals, it surpasses every thing of the kind we have seen in the country. The building fronts fifty feet on Bowery, and extends one hundred and 75 feet in depth. Through a spacious and well lighted hall, you enter what may be appropriately termed the principal *Saloon*. This is lighted by day through numerous sky lights; and in the evening by three costly chandeliers depending from the ceiling, and handsome lamps at the sides. The animals are contained in dens on each side, numbered, and their names painted above. The dens appear to be firmly built in the wall; but they are movable and distinct. The floors of all the cages are slightly inclined planes; and behind them runs a gutter also inclined, at the upper end of which is a pump, affording an abundant supply of water, which keeps the cages clean and inoffensive. Over the dens, is a promenade or gallery, with seats stuffed, and handsomely covered with crimson moreen. At the lower end is the orchestra of the very excellent band; while, at the upper end, the *Rhinoceros*, flanked by two Elephants, and surmounted by three cages, containing African Leopards, Lion, Lioness and two Bengal Tigers, form the most prominent point in the *coup d'œil* upon entering. Behind the orchestra are two elegant rooms, fitted up as ladies' and gentlemen's Saloons.

The list of animals embraces amid the great variety a male and a female Zebra, the untameable Gnu, the Buffalo, the white Bear, the Ostrich, two Emeus, the Cassowary, the Vulture and the Anaconda, which we mention as rather rare specimens.

HYDRO OXYGEN MICROSCOPE.

At No. 108 Broadway is an exceedingly interesting exhibition of the wonderful powers of the microscope. The light used in this instrument is derived from the application of a flame of oxygen and hydrogen united upon lime, and equals the most brilliant solar light. The specimens which are illustrated are projected on a disk containing 240 square feet of canvass. A drop of water magnified by it 2,400,640 times, presents a most singular scene, wherein insects before unseen present themselves in gigantick proportions and most singular conformations, engaged in as great a variety of sports and pastimes as well as contentions and war, as is common to those beings that boast a huger shape. The skeleton larvæ of the gnat, which is transparent, is magnified to such a degree that the peristaltick motion of the intestines, the circulation of the blood, and the motion of the chest in the act of breathing are distinguishable. The pores in the wood of so minute a tree as the rose tree, are magnified so as to appear one or two inches each in diameter—the eye of a fly is made to appear like a monstrous honey comb, several feet in extent. The powers of this instrument are truly wonderful; and not less so are the scenes which it adds to the world of the Seen.

HYALOCAUSTICKS.

We have been highly pleased with a view of several enameled pictures on glass, now exhibiting at 202 Broadway. The pictures are three in number, painted on glass by Hoadley and Oldfield, from the originals by John Martin. We do not recollect that we have ever seen before a specimen of painting on glass by vitrification. Certainly, we have never seen paintings of any kind that united such powerful and brilliant effect and such richness of colouring, with so complete and deceptive an imitation of nature. The subjects of these three pictures are, Belshazzar's Feast, Love among the Roses, and Charity, from a painting by Sir J. Reynolds. The first is remarkable for the skill in the management of the art of perspective, the perfection in its miniatures of human figures, and the exact imitation of artificial light. The second for the beauty of its landscape design, and the gorgeous splendour of its colouring. The last is a faithful picture of charity, protecting two little innocents and listening indulgently to their importunities.

BERKSHIRE MEDICAL INSTITUTION.

The annual commencement of this institution was holden on the 3rd inst. Fifteen gentlemen received the degree of M. D. The whole number of the class attending the lectures this season was 101. This institution, from the soundness of its government, and the talents and learning of its respective professors and teachers, commends itself to all who are engaged in the medical profession, or interested in medical education in this country. Situated in a village unsurpassed in beauty, unrivalled in salubrity, and farther celebrated for the wholesomeness of its morals and the purity and high character of its several literary institutions, it unites advantages for the medical student rarely to be met. The institution was incorporated in 1823. The trustees were likewise empowered to establish an Eye infirmary and General Hospital. A Lyceum of Natural History, a library, chymical and philosophical apparatus, a fine collection of anatomical preparations and models, and an extensive cabinet of minerals and other subjects of natural history, are connected with the Institution. The members of the present Faculty are as follows: H. H. Childs, M. D. *Theory and practice of Medicine and obstetricks*; E. Bartlett, M. D. *Pathological Anatomy and Materia Medica*; C. Dewey, M. D. *Botany Chymistry and Natural Philosophy*; M. Parker, M. D. *Anatomy, Surgery and Physiology*; John Frissel, A. M. *Demonstrator of Anatomy.*

Pittsfield is situated about thirty three miles east of Albany, and 140 west of Boston. Besides the above mentioned institution, it has a school called the Berkshire Gymnasium, consisting of three large brick buildings fitted up at a great expense, and capable of accommodating between two and three hundred scholars; a Lancastrian school, a large Female Seminary, a Select School, and an academy; and numerous other smaller schools. It has several cotton factories, three or four woollen factories, one of which is among the largest in the country—a button factory, a stock factory, a gun factory, and one or two breweries and numerous other smaller establishments of various kinds, evincing the industry and enterprise of its nearly 4000 inhabitants.

Twelve Spaniards, constituting the whole of a crew of a piratical vessel, have been recently tried at Boston, on a charge of robbing an American brig, and then setting fire to her, for the purpose of destroying the lives of those on board, as well as consuming the vessel. Seven of the twelve were found guilty of the atrocious piracy, and have been sentenced to death. The remaining five were acquitted and discharged. One of those found guilty was recommended to mercy, by the Jury.

These pirates were captured by a British armed vessel, and sent nere for trial by the British Board of Admiralty.

The Poor Rates of England and Wales absorb $8,700,000, a sum equal to the entire revenues of Prussia, to twice the revenue of Spain, five times the revenues of Sweden and Denmark, and about a third more than the revenue of the United States.

The French Cabinet was broken up on Tuesday evening, November 4th, by the simultaneous resignation of several of the ministers. The immediate cause of the dissolution of the French Cabinet, is stated to be the refusal of the King, though warmly urged to the measure by the ministers, to agree to an act of indemnity towards the persons in prison for political offences.

The Spanish Ministry is nearly in the same state of disorganization as the French. A new administration was about being formed.

The English Government have consented to advance the sum of *l.* 250,000 for the completion of that magnificent undertaking, the Thames Tunnel. The works we understand will be immediately resumed, under the direct superintendence of Mr. Brunel.

The census of Michigan, just completed, shows the population of 83,796. She is consequently entitled to admission into the union as a state.

THE SEA-BOY AND HIS SISTER.

By Mrs. Jewsbury.

What shall I bring thee from the Isles
Whither our vessel goes?
Bright are the sea-shells scattered there,
More bright than English rose;
And dust of gold and diamond,
May be bought where points our prow,
Some shall be thine and mine, ere death,
But what shall I bring the now sweet girl?
But what shall I bring thee now?

Fear not the sea, thou timid one,
My master and king is he,
And I brook not a word of treason heard,
Not a word, though it come from thee:
Nine weeks and a day, have I dwelt on land,
Summer sports and labour have seen,
I am sick of the flowers, I am tired of the trees,
I long for the shadows on ocean's green,
For the swell and the foam of the seas.

Let me go, for my heart beats thickly here,
Not more drowsy the wheel, than I,
But one touch of the rope, one breath of the gales,
And less light shall the dolphin ply;
I am wearied to death of landsmen's talk,
My friends all tread the deck,
But I love thee, sister, and ere I go,
Say, what shall I bring thee back sweet girl?
Say, what shall I bring thee back?

Ay, go, my brother; first and last
That ever bore such name to me;
Go, while the courage ebbing fast,
Remains to bid farewell to thee.
I've watched thy boyish years unfold,
I love thee as a brother now,
Yet go, for restless dreams have scrolled,
The name of *rover* on thy brow.

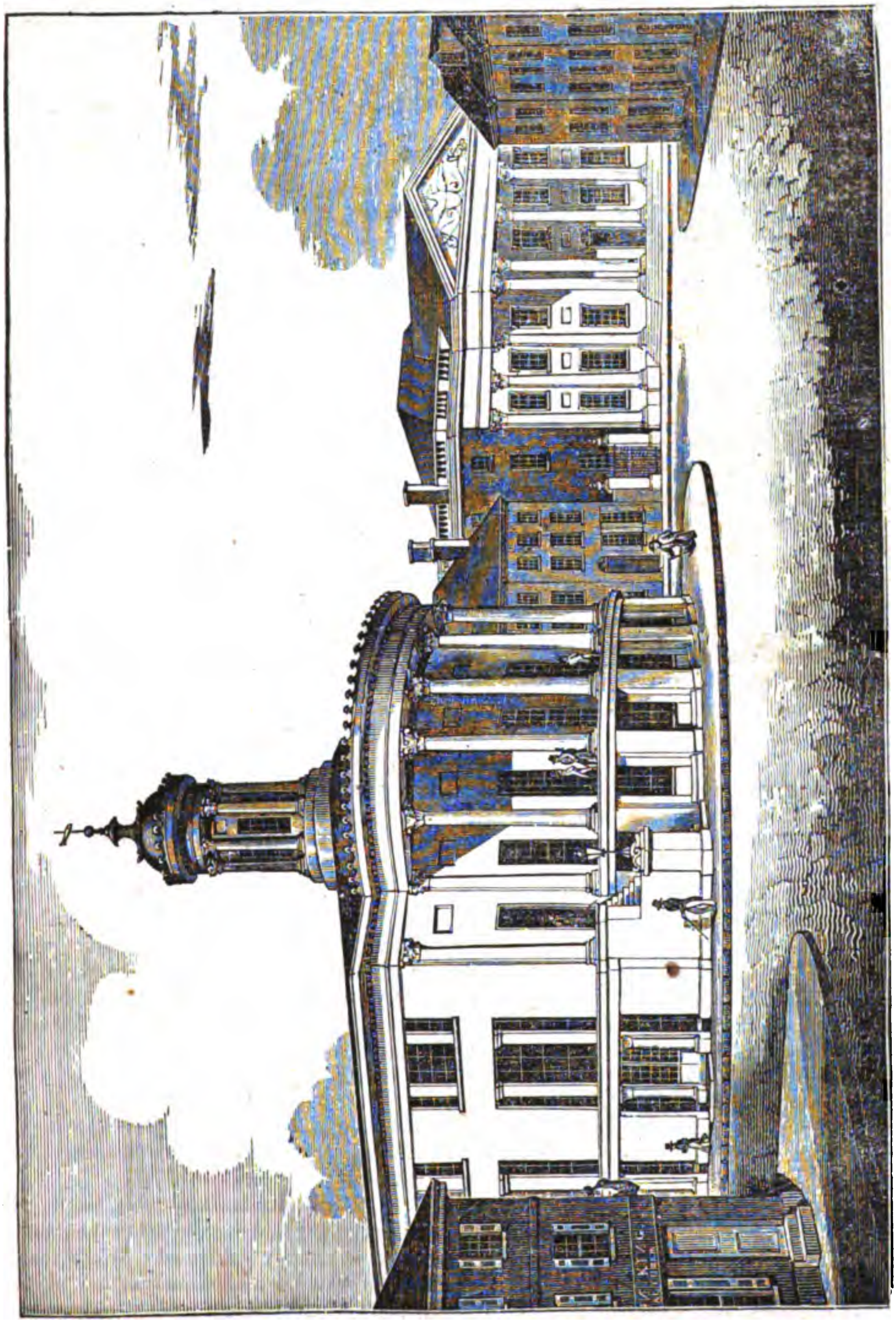
Think not I blame thee—thou art kind—
Hast left me in this cot at ease—
But oh, thou canst not make me blind
To the deep perils of the seas!
Thou speak'st of them with pleasant tongue—
Thou sayest thy heart and home are there;
But oft I think with spirit wrung
Thou wouldst not, if I were not here.—

An orphan with a pallid cheek;
A frame too somewhat overworn;
Enough—the heart is slow to break,
And sorrow comes but to be borne;
The heaviest is to see thee go,
Thus in thy youth, time after time;
To live upon thy toil and know,
For me thou wearest out thy prime!

Yet I must think thou lovest the sea,
'Twould madden me to doubt it long,—
' Love I the deep? now credit me
I love it with a love so strong
As thou thyself; it is my joy,
Has been my home, shall be my grave;
I tell thee, tempest scarce alloys
The bliss, the triumph of the wave,
So what shall I bring thee back dear friend?
So what shall I bring thee back?'

Bring back to me said the gentle one,
That which no caves can hide;
That which the deep sea cannot quench,
Thy love—no gift beside!

SECTION XXVIII.



THE PHILADELPHIA EXCHANGE.

PHILADELPHIA EXCHANGE.

Hitherto in this country, for the most part, architecture has been confined to the useful rather than the ornamental. And it is natural that such should have been the case, in a new country engaged mostly in trade and agriculture, of unsettled manners and policies, and where the impatient desire of accumulation leads to such constant changes of habitation as will never permit the *amor loci* to gain strength. *Love of place* is essential to the proper encouragement of the fine arts; and it is only where a population become purely indigenous, and desirous of aggrandizing their native place and permanent abode, that we may expect the establishment of publick institutions, or any munificent local expenditure of money. Boston and its vicinity can boast of some institutions, libraries, and publick works not unworthy of any country; and they owe their existence to the liberality of men who love their homes, and are not unambitious to enjoy the pleasure and reputation of having contributed something during their lives to improve and adorn them. New York has few publick institutions but those which are devoted to the exclusive enjoyment of select societies or private corporations. Washington is adorned with the Capitol, a splendid pile; Baltimore has her monuments, and Philadelphia boasts a few fine buildings, among the first of which may be enumerated the U. S. Bank, the Mint, and the new Exchange. The circumstances which have impeded the study and cultivation of architecture among us, however, are now about yielding to the improvements in society, and the increasing stability in the policies of the republick. And there is a fair prospect now before us, that architecture will soon assume that dignity which is accorded to it in other countries as a distinct and useful art, worthy the exclusive time and study of its professors, and the encouragement and fostering care of the community.

On the preceding page we have placed an engraving of the new Philadelphia Exchange, which may be considered the latest specimen of the progress of the architectural art in that city. We do not introduce it for the purpose of criticism, but merely to gratify our readers with a general description of its construction and object.

The exchange is situated at the corner of South Third and Walnut streets, and on the angle formed by the intersection of Dock with Walnut and Third streets. It was built in 1833 by the merchants and citizens of Philadelphia. It is constructed entirely of marble—is a rectangular parallelogram in form, ninety-five feet front on Third street, by one hundred and fifty on Walnut street. On Dock street however is a semi-circular projection, ornamented from the top of the basement story with six beautiful Corinthian columns; the capitals worked by the best Italian artists. This portico is of the height of two stories, and communicates with the 'Exchange Room' by means of nine separate windows, which may be used as doorways. On either side of this semi-rotunda, which is 72 feet in diameter in the basement, a flight of stone steps leads likewise to the main room of the edifice from Dock street. A hall passes through the centre of the building from Dock to Third Streets, and another likewise communicates with this from the north side. The basement story is fifteen feet in height—is arched throughout, and has twelve doorways on the Third street front and flanks. On the right or north side of the hall is the Post Office, seventy-four by thirty-six feet, and on the left are several insurance offices and banks, and the session-room of the chamber of Commerce. Two flights of stairs, one on each side of the hall, ascend to the second floor; at the head of these is the entrance to the Exchange Room, which is on the east front, extending across the whole building, and occupying an area of 3300 superficial feet. The ceiling extending to the roof, is of the form of a dome, and supported by several marble columns. Its pannels are ornamented with splendid fresco paintings, representing Commerce, Wealth, Liberty, &c. beautifully executed, appearing to have as striking a relief as sculptured work. On one side is a book containing a list of the daily arrivals and clearances of vessels. On the right is an extensive reading-room, to which admission is gained by subscription and the payment of an annual tax. The rooms upon the right side of the hall of this floor are appropriated for the meetings of stockholders, brokers, &c. The attick story is of the same height as the basement, containing six large rooms, occupied by library associations, artists, &c. The building is further ornamented on Third street, by a sort of piazza, let into the main wall, with several marble pillars rising from the top of the basement to the roof. The roof of the building is oval and surmounted by a circular lantern that rises forty feet. The establishment is owned and sustained by an association of merchants. It is a most convenient edifice for the purposes mentioned, and the picture which is herewith presented, embracing the Girard Banking House, is one of the most imposing for architectural display of which Philadelphia can boast. We would respectfully recommend, however, the demolition of Mr. Gowan's wine store, which is the only object that detracts from the beauty of the picture.

The prototype of the Philadelphia Exchange, is the Choragic Monument at Athens, called by modern Athenians the Lanterne of Demosthenes. This monument erected 330 years before Christ, near the eastern end of the Acropolis, and now partly enclosed in the *Hospitium of the Capuchins*, is said to present one of the richest examples of Grecian Corinthian architecture to be found in Attica.

HISTORY.

PHŒNICIA.

The Phœnicians are known in history principally as a navigating and commercial people, among whom the arts were early cultivated. While they were, as we have seen, the most famous of any in olden times for their commercial advantages, they were likewise the most extraordinary for the jealousy they invariably manifested in reference to their commercial interests and relations. The jealousy of the Phœnicians was extraordinary from the fact, that in all their business transactions, they avoided competitors; on the sea they pursued false courses to deceive them, and whenever opportunity offered they hazarded their own lives to destroy those of their rivals. They would attack ships, murder whole crews, and sink vessels, rather than that their commercial connexions should be made known.

Tyre and Sidon were the most opulent cities in this country. In these cities were cultivated, with success, philosophy, rhetorick, and all the elegant sciences. The wants of commerce brought to perfection arithmetick, geometry and astronomy. Workmen of every kind, sculptors, painters, builders, and architects abounded. The monarchs of adjacent nations, when they wished to erect sumptuous edifices or splendid monuments had recourse to the kings of this small country. To Hiram, king of Tyre, both David and Solomon applied when proposing to build a temple; he furnished them with precious metals and workmen.

The Phœnicians are regarded as the earliest navigators, merchants and workmen of the world. According to ancient records, they carried on trades, not only over all the coasts of the Mediterranean, but even over the ocean, as far as England, whence they exported tin. Tyre and Sidon are celebrated for their manufactures; the elegance of their works in wood, and the metals; and for the beauty and fineness of the linen they fabricated. It is believed that glass was invented by the inhabitants of Tyre. On its coast was found a small shell fish, which yielded that purple dye, known among us as the Tyrian dye; these fish are now no longer to be met with.

The Phœnicians, notwithstanding their advancement in knowledge, were very superstitious and idolatrous. They worshipped the sun, the moon, and fire, to which last they consigned human victims.

The first king of Sidon, was its founder, Sidon the son of Canaan. We know nothing of his successors till we come to Tetramnestus, who furnished three hundred galleys to Xerxes for his expedition against Greece. Under his successors, however, the Sidonians had become subject to the Persians, and revolted. Darius Ochus marched against them determined to subjugate or destroy them. Obliged to yield or die, the Sidonians set fire to their own dwellings, and themselves and families were buried beneath the ruins. Some of the inhabitants, however, escaped in their ships; and after the departure of Darius, they returned and partially rebuilt their city. They ever after retained so implacable a hatred to the Persians that when Alexander made war on the latter, they voluntarily opened their gates and yielded in gratitude to him, in opposition to the wishes of their own king Strato. Alexander, however, with true magnanimity placed one of their own citizens on the throne in his stead. His name was Abdalonimus, a man of modest merit, whom the conqueror found digging in his garden.

Tyre was founded by the posterity of Sidon. Herodotus gives to the older Tyre a great antiquity. The new city reared opposite to the ancient, on an island, is said by Josephus to have been built in the year B. C. 1255. Its first king was Abibal—the next Hiram, who was succeeded by Beleazar, his son. The seventh from him was Pygmalion, the brother of the celebrated Dido. The cruelties of Pygmalion obliged her to flee to Africa, where, being well received by the inhabitants of Utica, a Tyrian colony, she founded the mighty sovereignty of Carthage.

GREECE.

The history of Greece during this period is pursued first in a few details, respecting some of its different sovereignties.

The kings already named, who had governed Athens, had raised it to a considerable degree of civilization. But the king who laid the principal foundation of Athenian greatness, was Theseus. He united the 12 cities of Attica into one confederacy.

Theseus is said to have founded a more perfect equality among the citizens, in consequence of which, the state rather resembled a republick than a monarchy. Owing to the inconstancy of the people, he was banished from the country, notwithstanding his many virtues.

Codrus, the last Athenian king, devoted himself to the good of his subjects. With him royalty was abolished, since the people thought no man worthy of succeeding him. This change occurred towards the close of the present period, viz. 1069 years B. C.

Codrus being engaged in a war with the Heraclidæ, was told by the oracle that the army would be victorious whose chief should perish. He, therefore, with a chosen band, threw himself into the hottest of the battle, and turned the fortune of the day in favour of his countrymen, at the expense of his own life.

A dispute for the succession arose between two of his sons, and before they could accommodate their difference, the Athenians abolished royalty altogether, but placed Medon, one of the claimants, at the head of the state, with the title of Archon. This office was for life during more than 3 centuries; afterwards it was reduced to 10 years, and finally to one year.

Corinth, having been seized by Sysyphus, was governed in his family 250 years. The last king of this race was deposed by the Heraclidæ, 1099 years B. C.

The first great enterprise of the Greeks was the Argonautic expedition, 1263 years B. C. It was led by Jason, and is supposed to have been both a military and a mercantile adventure. Its destination was to Colchis, the modern Mingrelia, in Asia Minor.

According to some, the object was to open the commerce of the Euxine sea, and to secure some establishment on its coast. According to others, Jason wished to avenge the death of his kinsman Phryxus, and to recover his treasures, which had been seized by the king of Colchis. Hence, in the language of fiction or figure, it was the "Golden Fleece" that was the object to be recovered.

This expedition was thought to be of so much importance, that all the heroes of the age were anxious to engage in it. Among the 54 renowned captains who were in the single ship of Argo alone, in which Jason embarked, were Hercules, Theseus, Castor, and Pollux, Pirithous, Laertes, Peleus, Oileus, &c.

In the course of their voyage, they attempted to land for refreshment in a part of Phrygia, but were prevented by Laomedon, king of Troy, for which they took ample revenge on their return, by pillaging that city.

On their arrival in Colchis, Medea, the daughter of the king, fell in love with Jason, and, through her assistance, the Argonauts effected the object of their voyage. On their arrival in Greece, Hercules celebrated or instituted the Olympic Games.

A dispute for the divided sovereignty of Thebes, between the brothers Eteocles, and Polynices, gave rise to a war that was terminated by single combat, in which both were killed. This is called the war of the seven captains, and occurred 1225 years B.C.

The sons of the commanders slain in this war renewed the quarrel of their fathers, about ten years afterwards. This is called the war of the Epigonoi, a subject celebrated by Homer in a poem now lost.

But the most celebrated event of this period, in the annals of Greece, is the Trojan war. It commenced 1193 years B. C., and terminated in ten years. Troy was taken and burnt to the ground. This war was undertaken by the princes of Greece to avenge the wrongs sustained by Menelaus, king of Lacedæmon, whose wife, Helen, had been seduced away by Paris, a Trojan prince. The details of this war are derived from Homer; but he is reasonably supposed to have related facts, for the most part.

Troy, the capital of Phrygia Minor, was founded 1546 years B. C. by Scamander, who led thither a colony from Crete. Troas, the fifth in succession from Scamander, either built a new city, or enlarged the old one, and named it after himself, Troy. The Trojans were a brave and warlike people.

The number of the Grecian warriors is supposed to have been about 100,000. Nearly all Asia Minor was leagued with Priam, king of Troy. The Greeks, on landing at Troas, were warmly opposed, and they spent the first 8 or 9 years in reducing such cities and islands as favoured the cause of Troy. At length the siege of that capital began, and the most heroick deeds were performed on both sides. At this juncture, the camp of the Greeks was visited by a pestilence, and a quarrel ensued between Agamemnon and Achilles, the Grecian leaders.

The death of Patroclus, slain by Hector, impelled Achilles to return into the Grecian camp. Hector was killed by Achilles, and Achilles fell by the hand of Paris, who was himself slain by an arrow. At last the Greeks gained possession of the city by stratagem, and utterly destroyed it. No vestige of its ruins now remains.

Such of the Trojans as survived sought new settlements in distant regions. Antenor established himself in Italy, where he founded the nation of the Heneti. Æneas settled also in Italy, where he founded the kingdom of Alba.

The war of the Heraclidæ, among the Greeks, began about 80 years after the destruction of Troy. Hercules, the son of Amphitryon, sovereign of Mycenæ, was banished from his country, with all his family, while the crown was possessed by a usurper. After a period of a century, his descendants, called Heraclidæ, returned to Peloponnesus, and subduing all their enemies, took possession of the states of Mycenæ, Argos, and Lacedæmon. This return of the Heraclidæ is an event often spoken of in history.

A long period of civil war succeeded, and Greece, divided among a number of petty tyrants, became a prey to oppression or anarchy. The difficulties of the times drove many of the Greeks from home, who founded important colonies, as we shall hereafter learn.

EGYPT.

Concerning the Egyptians, during this period, very little is known with certainty. Apophis is thought to have been the Pharaoh who, together with his army, was drowned in the Red Sea. Amosis, Amenophis II., and one or two others, were warriors and conquerors.

A few things may be subjoined respecting some of the Egyptian kings during this period. Mœris caused the celebrated lake, called by his name, to be dug, to receive the waters of the Nile, when the inundation was too abundant, and to water the country when it proved deficient.

Hermes Trismegistes is celebrated for his philosophical writings. He added 5 days to the year, which before consisted only of 360. Amosis abolished the practice of human sacrifices, and conquered Heliopolis, the ancient capital of Lower Egypt.

Actisanes, king of Ethiopia, united Egypt and Ethiopia under his government. He bore his prosperity with great prudence, and behaved himself in a most affectionate manner towards his new subjects.

Having caused a general search to be made after the Egyptian robbers who infested the country, he commanded their noses to be cut off, and then banished them to the remotest part of the desert, between Syria and Egypt, where he built them a town, which, from the mutilation of its inhabitants, was called Rhinoco lura.

A Memphite of ignoble extraction was exalted to the throne. The priests characterized him as a magician, and pretended that he could assume whatever form he pleased. His Egyptian name was Cetes, which the Greeks rendered Proteus.

It was during his reign, that Paris and Helen were driven on the coasts of Egypt, in their passage to Troy, but when the Egyptian monarch understood the shameful breach of hospitality which the young stranger had committed, he ordered him to quit his dominions

LYDIA.

The history of the kings of Lydia is very obscure. They were divided into three dynasties. 1. The Atydæ. 2. The Heraclidæ. 3. The Mermnadæ. The history of Atydæ is altogether fabulous. Argon was the first of the Heraclidæ, and Candaules the last. Argon reigned about 1223 years B. C. The Lydians are celebrated as merchants and traffickers.

Lydia is supposed to have been founded by Lud, son of Shem. It was, however, called Lydia, from Lydus, one of its kings. It was previously called Mæonia, from Mæon, also one of its kings. It was conquered at length by the descendants of Hercules.

Lydia Proper was, strictly speaking, at first only that part of Mæonia which was seated on the Ægean Sea; but when the Greeks or Ionians settled there, the ancient inhabitants were driven to the interiour. The invaders named the sea coasts where they settled Ionia, after the country whence they had emigrated, or rather, whence they had been driven by the Heraclidæ; while the Lydians gave their name to the new countries in which they settled.

Long before the invasion of the Ionians, the natives of Lydia were devoted to commerce. The earliest instance on record of a gold and silver coinage is found in their history. They were also the first people who exhibited publick sports.

ITALY.

Italy appears to have been inhabited at a remote era. So early as 1289 years B. C. we read of a king named Janus, who, having arrived from Thessaly, planted a colony on the river Tiber. Four sovereigns succeeded him in Latium; during the reign of the last of whom, viz. Latinus, arrived Æneas, the Trojan prince in Italy. Æneas married Lavinia, the daughter of Latinus, and succeeded him in the sovereignty. After Æneas there was a succession of kings to the time of Numitor, the grandfather of Romulus and Remus, the founders of Rome.

The history of these kings is, however, very obscure and confused, and very little dependance can be placed upon it. Of the numerous petty kingdoms of which Italy was composed, those of Etruria and Latium alone deserve attention. The Etruscans are thought to have been a very polished people. The inhabitants of Latium were the immediate ancestors of the Romans. A considerable part of Italy was doubtless peopled by the Greeks.

Italy, afterwards the seat of the Roman power, was peopled at an early era, though we cannot determine the particular point of time, with certainty as to the country at large. The colony on the Tiber, as we have seen, was settled nearly 13 centuries before

Christ. There is every reason to believe that a part of Italy was inhabited by a refined and cultivated nation, many ages before the Roman name was known.

The Etruscans are justly considered as such a nation; a fact which is indicated by the monuments in the fine arts which they have left, and some of which exist to this day. Their alphabet, resembling the Phœnician, disposes us to believe them to have been of eastern origin.

Though many of the inhabitants of Italy originated from Greece and the east, yet a portion of them, it is believed, must have originated from the Celtic or Gomerian tribes of the north, who entered Italy from that quarter.

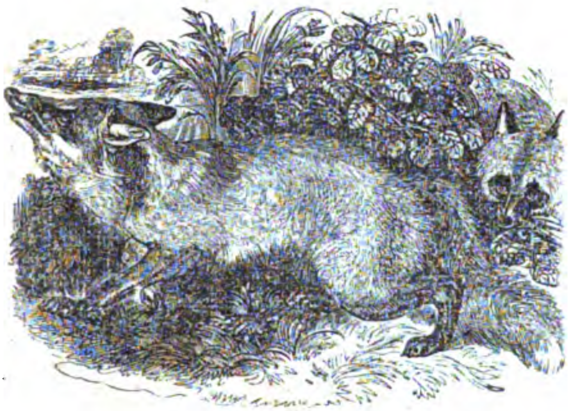
The story of Latinus and Æneas is briefly as follows. At the time of the arrival of the latter in Italy, Latinus was engaged in a war with the Rutuli; and, on hearing of this arrival, he immediately marched towards the strangers, expecting to find an unprincipled banditti.

But Æneas, though commanding a body of hardy veterans, held out the olive of peace. Latinus listened to his melancholy tale, and pitying the misfortunes of the Trojan exiles, assigned them a portion of land, on condition of their joining against the Rutuli.

Æneas eagerly embraced the offer, and performed such essential service in the cause of the Latins, that this monarch bestowed on him his only daughter, Lavinia, in marriage, with the right of succession to the crown.

NATURAL HISTORY.

Mammalia. Order Carnivora.



THE RED FOX.
Canis Fulvus.

Our acquaintance with this interesting animal is of long standing; and while, we undertake the pleasing task of detailing his history, we will not fail in the outset to accord to him that craftiness and address for which he is meritoriously reputed, the world over. But at the same time we are obliged to regret that our acquaintance never proceeded to that mutual confidential familiarity which would allow us to approach each other without an inevitable *explosion*, that always either created a most wide and sudden breach between us, or brought his Foxship to our feet the victim of a cruel passion for fun and fir, that always possessed us. We are constrained to acknowledge, that Fox-hunting was with us an early passion; and although our aching bones may in future compel us to say it with regret, there was neither dingle nor mountain, morasses, swamps, nor "the unforded streams,' in the country, that could check our ardour in the exciting sport. Scarcely a winter day's sun went down, that we did not see the pack well fed and kennelled; and the same sun seldom dissolved the morning frost, before the same hounds might open on a fresh trail in the neighbourhood of the farm yard and the poultry-roosts, in a few moments compelling the sly pilferer to "break cover" from the neighbouring wood. The musick of the hounds was wont to fill our youthful heart with delight, and at the 'death' of the Fox, when we had a hand in it, we were wont to exult with cruel pride.

The Red Fox is found throughout North America, and the species is particularly numerous in New England and the middle and southern states of the Union. He is notorious for activity and cunning, and especially for his depredations on the poultry yards. His favourite day-haunts are dense thickets of pine and hemlock, ledges covered with thick underbrush, and ravines deeply overshadowed. At certain seasons however he may be observed lurking in the sun upon hill sides, hunting mice in the meadows, or frisking about among the dry leaves of an open forest. The night is the favourite season for his depredatory excursions, though he often extends them until late in the morning, when not unfrequently he may be seen bearing off his prey to a neighbouring wood. 'Like all his kindred species' observes the lamented Dr. Godman, 'the Red Fox is distinguished by the possession of keen senses* and great sagacity or craftiness, which enables him almost to bid defiance to traps, while his strength and swiftness of foot render it extremely difficult to capture him in the chase. Once fairly roused by the hounds, this animal dashes off with great speed, and soon far outstrips pursuit, and did he not lose the advantage of his celerity by remitting his efforts, might soon render the exertions of the sportsman nugatory. But the persevering hounds again and again drive him to his utmost speed, and eventually wear him down, though not until a wide extent of country has been traversed, and huntsmen, horses and dogs have suffered severely from fatigue.'

It is only in some of the western and southern states that the Fox is hunted upon horses. In New England he is hunted on foot with hounds; and the hunters lay in wait in the known routes of the Fox, and shoot him down as he approaches with either fowling-piece or rifle, though the fowling-piece is most commonly used. Dr. Goldsmith says, that the true way of hunting Foxes, is to proceed in the morning, first to their burrows and stop them up; then letting the dogs loose, they will undoubtedly start the game near by, which will make immediately for its hole, where the hunter being stationed can easily shoot it as it approaches. So far as our experience goes, this will not apply to the Red Fox of the U. S. The Red Fox of this country seldom burrows, except about the period of its producing young, or in cases of actual necessity, always preferring to nestle in some snug leafy corner upon the surface, or a hollow log. And it is seldom that a Fox will '*hole*' as soon as convenient after 'breaking cover.' On the contrary, we have witnessed hundreds of instances, wherein the Fox, upon being roused by the hounds, would lead off some thirty or forty miles from the place of starting, and continue to run day and night until the hounds would give out from fatigue; which however might not take place until twenty-four hours after *we* had sought rest for our limbs, wearied in the long pursuit. We knew of a chase that took place about twenty miles from Boston; wherein the Fox being fiercely pursued by about twenty hounds was pressed towards the city after several circuits, and ran over Charlestown Bridge into the streets of the city. There, from the bruises he received from missiles, and the affright he experienced on every side, from the shouts of multitudes, the poor animal was obliged with seeming reluctance to take refuge in the cellar of the Marlboro' Hotel, kept by Earle, where he was taken. We have likewise known them after running nearly a whole day, take refuge in a pig-sty, and under barns and hay-stacks. At the south, the Fox upon being hotly pursued takes refuge not unfrequently in trees, but we never knew an instance of the kind in New England.

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* Their sense of smell seems to be more perfect than that of sight. We remember one instance which seems to illustrate that their sense of sight is not very acute. In one of our hunting excursions, we saw the Fox that we had roused, playing about the stumps of a field, with the grace and pranks of a kitten, although the hound was in full cry constantly at his heels. We approached within about fifty yards and discharged our piece at the gay fellow, but without effect. After taking a circuit of about a hundred yards, he returned towards us and approached within a *few feet* of our person; when, having either seen or scented us, he darted off in another direction for the mountains, leaving the dog miles behind him, and ourself as far behind the dog. We heard of neither dog nor Fox again *that day!* It is obvious the Fox had not seen us before the time on which he took occasion to bid us farewell, although we were in an open field, the snow was several inches deep, and we had once spoken so loudly to him with our fowling-piece.

In the words of Dr. Godman, 'the general colour of this Fox when in full summer pelage is bright ferruginous on the head, back and sides, but less brilliant towards the tail. Beneath the chin it is white, while the throat and neck are a dark gray, which colour is continued along the anteriour part of the belly in a narrow stripe that passes along the breast. The under parts of the body towards the tail are very pale red; and the anteriour parts of the fore legs and feet, as well as the fronts of the inferiour part of the hind legs, are black. The tail is very bushy but less ferruginous than the body, the hairs being mostly terminated with black, which is more obvious towards the extremity than at the origin of the member, giving the whole a dark appearance. A few of the hairs are lighter at the end of the tail, but not sufficiently to allow us to state that it is tipped with white.' We have seen them with several inches of white at the tip of the tail. And frequently at the north do we hear hunters judging of the age of a Fox, by the quantity of white hairs upon the tip of his tail. It being the supposition, that the older the Fox, the more white has he on the tip of the tail. The rule cannot be said to be invariable however, for we have known old Foxes without any white on their tails.

The fur of the Red Fox is long, fine, brilliant in colour, and lustrous over the whole body. In the winter, its length, denseness and brilliancy are greatly increased. The animal is about two feet long and twelve or eighteen inches high: the tail is about sixteen inches long. The peltry is valued at about a dollar or a dollar and a quarter, and is employed in various ways by the manufacturers. Immense quantities of the Red Fox peltries are annually shipped to Europe. To be valuable the Fox should be killed in the winter. In New England you frequently find a farmer with his hounds, who will show you in the spring twenty or thirty and sometimes fifty Fox-skins, the boasted booty of the preceding winter. In the middle and southern states the fur of this Fox is considered of little or no value.

The food of the Red Fox is so exceedingly various, that it would seem warrantable to place him among the omnivorous animals, were it not that the major part of it is flesh. When he cannot conveniently procure his most delicate repast, poultry, he does not hesitate to humble his palate to that opposite extreme, wherein he relishes carrion, rats, mice, serpents, toads and lizards. He is also fond of seizing hares and rabbits, chasing them as the hound does himself. He catches squirrels and partridges, and whenever he has the opportunity he will relieve the trapper from taking birds, or whatever may be his victim, from his snares and springes. When urged by hunger, he eats vegetables and insects; and it is said, that those that live near the sea coast, will, for want of other food, eat crabs, shrimps, and shell fish. He is also fond of honey, and attacks the wild bee with success. 'Although at first they fly out upon the invader,' observes Goldsmith, 'and actually oblige him to retire, this is but for a few minutes, until he has rolled himself upon the ground, and thus crushed such as stick to his skin; he then returns to the charge, and at last, by perseverance, obliges them to abandon their combs, which he greedily devours, both wax and honey.'

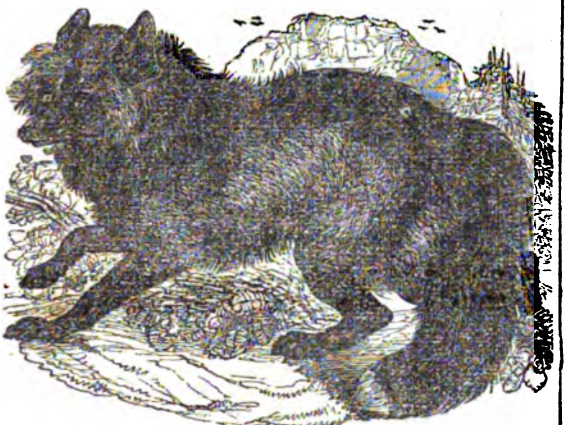
The Red Fox when young may be domesticated to a considerable degree; and were it not for its odour, which very strongly resembles that of the skunk, would become on account of its playfulness and vivacity a very interesting and amusing little pet. Dr. Godman mentions one that was domesticated by a gentleman of Germantown. 'It lived in the same cage and in perfect harmony with a raccoon; showed no fear nor enmity towards the dogs of the farm, but always exhibited the greatest delight on being allowed to play with them.' He mentions another that was fostered by a common cat, but was accidentally killed before it could be known to what result such a singular relation would have led.

The Fox is diffused over Europe, and every where displays the same activity and cunning. The chase of the Fox is a very favourite diversion in Great Britain where it is pursued with the greatest ardour

But there is an obvious difference between the Red Fox of this country and that of Europe, although the precise differing points have never been definitely marked. In the book of the Zoological Gardens, a wood engraving is given of two Foxes distinguished therein as the European Fox and the Red Fox. This picture of the European Fox, is, we think, one of the best representations of our Red Fox that we have ever seen; we have placed a faithful copy of it at the head of this article. The picture of the Red Fox there given however, does not correspond to the Red Fox of this country; the hair is longer, and the body larger and more clumsily formed. There has been some dispute among naturalists as to the real difference between the Red Fox of Europe and that of America; we shall advert to it more particularly hereafter.

The Fox of all wild animals, is most subject to the influence of climate; and there are found as many varieties in this kind almost as in any of the domestick animals. Goldsmith says there are three varieties of this animal in Great Britian. The greyhound fox, is the largest, tallest, and boldest; and will attack a grown sheep. The mastiff fox is less, but more strongly built. The cur fox is the least and most common. It lurks about houses, and steals every thing within its reach.

In the colder countries round the pole, the foxes are of all colours; black, blue, gray, iron gray, silver gray white with red legs, white with black heads, white with the tip of the tail black, red with the throat and belly entirely white, and lastly, with a stripe of black running along the back, and another crossing it at the shoulders.* In the United States we have the Black or Silver Fox, the Swift Fox, the Cross Fox, and the Gray Fox. In the northern parts of America the Arctick Fox, (white,) the Sooty Fox and other varieties are abundant.



THE BLACK OR SILVER FOX.

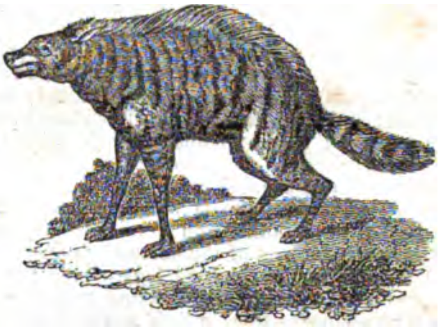
Canis Argentatus.

Were it not for the copious and beautiful black fur of this species, there would be scarcely a characteristick by which to distinguish it from the common fox, (*C. Cinereo-argenteus*) to which in all other respects it is strikingly similar. In form and proportions, as well as in gait and expression of countenance, in sports, mode of feeding and exhibition of anger, there is nothing which may not be equally applied to this and the species above mentioned.

The colour of this fox, as its name implies, is a richly lustrous black, having a small quantity of white mingled with it in different proportions on different parts of the body. Individuals vary considerably in this respect; some have no white except at the extremity of the tail, or a few white hairs scattered along the middle of the breast, or else at irregular intervals a sprinkling of solitary white hairs along the sides, which by contrast add to the intensity and brilliance of the black. This last colour is produced by the longer silken hair which forms the great mass of the pelage, and is occasionally tipped with white; there is a grayish silken hair that constitutes the immediate covering of the skin. Over the whole body and tail the hair is long and tufted, on the paws it is short, and on the face still shorter, the colour of the latter being mostly whitish on the fore part; the eyes are of a yellowish tint.*

This fox resembles the kindred species in the unpleasant odour it diffuses, which is in a considerable degree owing to its urine, as well as to a peculiar glandular secretion. After having satisfied its hunger, it hides the remainder of the food, and when disturbed, expresses its anger by growling like a dog. A comparison of the American black fox with the black fox of Europe may hereafter show differences sufficient to authorize it to be considered as distinct from that species. But until better opportunities of examination are afforded we shall hazard no opinion on the subject. The black fox is found throughout the northern parts of America, and is also obtained in the north of Asia, where it is considered among the richest and most valuable of furs.

We may add that the Natural Historians of Europe describe the black Fox of that continent as being of a pure shining black. The skin of that Fox is of all others most esteemed, a single skin often selling for forty or fifty dollars. 'The hair of these' black Foxes, observes Goldsmith, 'is so disposed, that it is impossible to tell which way the grain lies; for if we hold the skin by the head the hair hangs to the tail; and if we hold it by the tail, it hangs down equally smooth and even to the head.' These are often made into muffs, and are at once very beautiful and warm. The black Fox is exceedingly rare in all the countries it inhabits.



AARD WOLF.

Proteles Cristata.

This animal is a genus of digitigrade carnivorous mammals founded by M. Isadore Geoffroy St. Hilaire, for the purpose of giving a place to a new and singular quadruped brought from the interiour of Caffraria by the late traveller Delalande. The three specimens of this interesting animal procured by M. Delalande were all, unfortunately, of an immature age, and had not acquired their permanent teeth, so that the characters of their adult dentition still remain to be determined. Enough, however, is known to enable us to assign the most prominent and influential characters of the genus, and to infer with a tolerable degree of accuracy, the habits and economy of the animal.

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*Buffon, Renard.

* "The silver fox is an animal very rare even in the country he inhabits. We have seen nothing but the skins of this animal, and those in the possession of the natives of the woody country below the Columbia falls, which makes us conjecture it to be an inhabitant of that country exclusively. It has a long deep lead coloured fur for a file, intermixed with long hairs, either of a black or white colour, at the lower part, and invariably white at the tip, forming a most beautiful silver gray."—Lewis & Clark, ii. p. 169.

It is an observation at least as old as Pliny, that Africa is a land of wonders, which continually produces a succession of new and singular objects. In Zoology, the maxim of the Roman philosopher, as to African wonders, is verified almost daily. Amongst the most recent examples of this fact we may adduce the discovery of the *proteles;* an acquisition of peculiar interest to the zoologist, as forming the intermediate link which connects the civets with the dogs and hyænas, three genera which have hitherto stood, as it were, insulated from surrounding groups, and widely separated from one another. The dogs and hyænas, indeed, had been united a short time previous by the discovery of an intermediate species in the same locality which has since produced the proteles; but it is this latter species alone, which, uniting the characters of all these three genera, enables us to trace their natural affinities, and to assign to them their proper position in the scale of existence.

To the external appearance and osteological (bony) structure of a hyæna, this truly singular animal unites the head and feet of a fox, and the teeth and intestines of a civet. It has five toes on the fore feet, and four only on the hind; the innermost toe of the fore foot is placed, as in the dog's, at some distance above the others, and therefore never touch the ground when the animal stands or walks. The legs also are completely digitigrade; that is to say, the heel is elevated, and does not come into contact with the surface, as in man and other similarly formed animals which walk upon the whole sole of the foot, and are thence said to be plantigrade. It is of great importance to remark the difference between these two modifications of the locomotive organs, because they have a very decided and extraordinary influence upon the habits and economy of animal life. Digitigrade animals, which tread only upon the toes and carry the heel considerably elevated above the ground, have much longer legs than plantigrade animals, and are therefore especially fitted for leaping and running with great ease and rapidity. Accordingly, it will be observed that the horse, the stag, the antelope, the dog, and other animals remarkable for rapidity of course, partake strongly of this formation; and even their degree of swiftness is accurately measured by the comparative elevation of the heel. Inattentive observers sometimes misapprehend the nature of this peculiar conformation of the extremities of digitigrade animals, and are apt to confound the hough with the ankle, and to mistake for the knee what is really the heel of the animal. Thus we have heard it said, that in the hind legs of the horse, the knee was bent in a contrary direction to that of man. This is by no means true: a little attention to the succession of the different joints and articulations will show that what is called the cannon-bone in the horse, and other digitigrade animals, in reality corresponds to the instep in man, and that what is generally mistaken for the knee really represents the heel.

In the particular case of the proteles the natural effect of the digitigrade formation is, in some degree, lessened by the peculiar structure of the fore legs, which, contrary to the general rule observable in most other animals, are considerably longer than the hind. In this respect, also, the proteles resembles the hyænas; and in both genera this singular disproportion between the anteriour and posteriour extremities abridges the velocity properly due to their digitigrade conformation. It has been already observed that the only individuals of this genus which have been hitherto properly observed were young specimens, which had not acquired their adult dentition; but it was sufficiently obvious to the experienced eye of M. Cuvier, who first examined them, that the dental system of the mature animal must very closely resemble, if it be not actually identical with, that of the civets and genets. The young animal presented three small false molars and one tuberculous tooth on each side, both on the upper and under jaws; and we shall find, in the sequel, that the approximation of M. Cuvier is fully justified by the evidence of another accurate observer, who had an opportunity of examining this animal in its native regions. The genus proteles contains but a single species, the *Aard-wolf,* or earth-wolf (*Proteles cristata,*) so called by the European colonists in the neighbourhood of Algoa Bay, in South Africa, the locality in which M. Delalande procured his specimens of this animal. The size of the aard-wolf is about that of a full grown fox, which it further resembles in its pointed muzzle; but it stands higher upon its legs, its ears are considerably larger and more naked, and its tail shorter and not so bushy. At first sight it might easily be mistaken for a young striped hyæna, so closely does it resemble that animal in the colours and peculiar markings of its fur, and in the mane of long stiff hair which runs along the neck and back: indeed, it is only to be distinguished by its more pointed head, and by the additional fifth toe of the fore feet. The fur is of a woolly texture on the sides and belly, but a mane of coarse, stiff hair, six or seven inches in length, passes along the nape of the neck and back, from the occiput to the origin of the tail, and is capable of being erected or bristled up, like that of the hyæna, when the animal is irritated or provoked. The general colour of the fur is pale cinereous (ash-coloured,) with a slight shade of yellowish-brown: the muzzle is black and almost naked, or covered only with a few long stiff mustaches. Around the eyes, and on each side of the neck, are dark brown marks; eight or ten bands of the same colour pass over the body in a transverse direction, exactly as in the common striped hyæna; and the arms and thighs are likewise marked with similar transverse stripes. The legs and feet are a uniform dark brown in front, and gray behind. The long hairs of the mane are gray, with two broad rings of black, the second of which occupies the point; those of the tail are similarly marked, and equally long and stiff; whence it appears as if the mane and tail were clouded with an alternate mixture of black and gray. The ears are gray on the interiour, and dark brown on the outer surface.

In its habits and manners the aard-wolf resembles the fox: like that animal it is nocturnal, and constructs a subterraneous burrow, at the bottom of which it lies concealed during the day-time, and only ventures abroad on the approach of night, to search for food and satisfy the other calls of nature. It is fond of the society of its own species; at least, many individuals have been found residing together in the same burrow; and, as they are of a timid and wary character, they have generally three or four different entrances to their holes, so that if attacked on one side they may secure a retreat in an opposite direction. Notwithstanding the disproportionate length of their fore legs they are said to run very fast; and so strong is their propensity to burrow, that one of M. Delalande's specimens, perceiving itself about to be run down and captured, immediately ceased its flight, and began to scratch up the ground, as if with the intention of making a new earth.

M. Isidore Geoffroy St. Hilaire, in his paper on the Proteles, inserted in the eleventh volume of the *Memoires du Museum,* has bestowed upon this species the name of *Proteles Lalandii.* He has done so in the belief that the species has not been indicated by any previous traveller. We have considered it proper, however, to substitute the specifick name of *Proteles Cristata,* for that proposed in honour of M. Lalande, for both Sparrman and Levaillant have mentioned the aard-wolf long before the date of M. Delalande's journey; and the former has not only described it with tolerable accuracy, but has even ascertained its true generick characters, and associated it with the civets, under the denomination of *Viverra cristata*. The passage alluded to will be found in the English translation of *Sparrman's Travels*, vol. ii., p. 177.

In the *Second Voyage* of Levaillant, vol. ii., p. 360, mention is likewise made of this animal under the appellation of 'loup de terre,' which is a simple translation of its colonial name aard-wolf.

Sparrman mentions having found ants in the stomach of the proteles, and these, it may be observed, are also a favourite food of the bear. The dental system of this animal would further lead us to suppose that, like the fox and hyæna, it also feeds upon wild grapes and bulbous roots, as well as upon carrion and the produce of the chase.

THE JACKAL.

Canis Aureus.

The Jackal, one of the greatest pests of the countries which he inhabits, is diffused over nearly the whole of Asia and the north of Africa, occupying in the warmer regions of those continents the place of the wolf, of whom in many particulars he may be considered as offering a miniature resemblance. In size he is little larger than the common Red Fox, but he differs from that animal in the form of the pupils of his eyes, which correspond with those of the dog and wolf, in the comparative shortness of his legs and muzzle, in his less tufted and bushy tail, and in the peculiar marking of his coat. The colouring of his back and sides consists of a mixture of gray and black which is abruptly and strikingly distinguished from the deep and uniform tawny of his shoulders, haunches, and legs: his head is nearly of the same mixed shade with the upper surface of his body, as is also the greater part of his tail, which latter however becomes black towards its extremity; his neck and throat are whitish, and the under surface of his body is distinguished by a paler hue.*

Although the species of the wolf approaches very near to that of the dog, yet the jackal seems to be placed between them; to the savage fierceness of the wolf, it adds the impudent familiarity of the dog. Its cry is a howl, mixed with barking, and a lamentation resembling that of human distress. It is more noisy in its pursuits even than the dog, and more voracious than the wolf. The jackal never goes alone, but always in a pack of forty or fifty together.—These unite regularly every day to form a combination against the rest of the forest. Nothing then can escape them; they are content to take up with the smallest animals; and yet, when thus united, they have courage to face the largest. They seem very little afraid of mankind, but pursue their game to the very doors, without testifying either attachment or apprehension. They enter insolently into the sheepfolds, the yards, and the stables, and when they can find nothing else, devour the leather harness, boots, and shoes, and run off with what they had not time to swallow.

They not only attack the living but the dead. They scratch up with their feet the new-made graves, and devour the corpse, how putrid soever. In those countries, therefore, where they abound, they are obliged to beat the earth over the grave, and mix it with thorns to prevent the jackals from scraping it away. They always assist each other, as well in this employment of exhumation, as in that of the chase.—While they are at this dreary work, they exhort each other by a most mournful cry, resembling that of children under chastisement; and when they have thus dug up the body, they share it amicably between them. These, like all other savage animals, when they have once tasted of human flesh, can never after refrain from pursuing mankind. They watch the burying-grounds, follow armies, and keep in the rear of caravans. They may be considered as the vulture of the quadruped kind; every thing that once had animal life, seems equally agreeable to them; the most putrid substances are greedily devoured; dried leather, and any thing that has been rubbed with grease, how insipid soever in itself, is sufficient to make the whole go down.

They hide themselves in holes by day, and seldom appear abroad till night-fall when the jackal that has first hit upon the scent of some large beast gives notice to the rest by a howl, which it repeats as it runs; while all the rest that are within hearing, pack in to its assistance. The gazelle, or whatever other beast it may be, finding itself pursued, makes off towards the houses and the towns; hoping, by that means, to deter its pursuers from following; but hunger gives the jackal the same degree of boldness that fear gives the gazelle, and it pursues even to the verge of the city, and often along the streets. The gazelle, however, by this means, most frequently escapes; for the inhabitants sallying out, often disturb the jackal in the chase; and as it hunts by the scent, when once driven off it never recovers it again. In this manner we see how experience prompts the gazelle, which is naturally a very timid animal, and particularly fearful of man, to take refuge near him, considering him as the least dangerous enemy, and often escaping by his assistance.

But man is not the only intruder upon the jackal's industry and pursuits. The lion, the tiger, and the panther, whose appetites are superiour to their swiftness, attend to its call, and follow in silence at some distance behind.* The jackal pursues the whole night with unceasing assiduity, keeping up the cry, and with great perseverance at last tires down its prey; but just at the moment it supposes itself going to share the fruits of its labour, the lion or the leopard comes in; satiates himself upon the spoil, and his poor provider must be content with the bare carcass he leaves behind. It is not to be wondered at, therefore, if the jackal be voracious, since it so seldom has a sufficiency; nor that it feeds on putrid substances, since it is not permitted to feast on what it has newly killed: Besides these enemies, the jackal has another to cope with, for between him and the dog, there is an irreconcilable antipathy; and they never part without an engagement. The Indian peasants often chase them as we do foxes; and have learned by experience, when they have got a lion or a tiger in their rear. Upon such occasions they keep their dogs close, as they would be no match for such formidable animals, and endeavour to put them to flight with their cries. When the lion is dismissed they more easily cope with the jackal, who is as stupid as he is impudent, and seems much better fitted for pursuing than retreating. It sometimes happens that one of them steals silently into an outhouse to seize the poultry, or devour the furniture, but hearing others in full cry, at a distance, without thought, it instantly answers the call, and thus betrays its own depredations.—The peasants sally out upon it, and the foolish animal finds, too late, that its instinct was too powerful for its safety.

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* Tower Menagerie.

* Linnæi Systema.

MATHEMATICAL GEOGRAPHY.

We are aware that Mathematical Geography is exceedingly dry to general and superficial readers. But in giving a system of Universal Geography, we should sacrifice the interest of the lover of useful knowledge, and do a manifest injustice to the science, did we not lay out the necessary ground work of the system at the outset. Mathematical Geography is the very foundation of all Geography; and to proceed without a competent knowledge of this necessary part of the science, would be building castles in the air, or travelling in a strange country without compass or guide. Our readers must bear with us therefore a little longer, and when this necessary and unavoidable part of our task is finished, we shall take pleasure in laying out the physical Geography of the globe, and illustrating it with appropriate engravings.

LONGITUDE—MODE OF MEASURING TIME—SIDEREAL TIME—APPARENT SOLAR TIME—MEAN SOLAR TIME—EQUATION OF TIME.

Having ascertained the parallel of latitude in which any particular place is situated, the next inquiry is directed to the finding of the longitude, or the position which a place occupies in the parallel with respect to what is called the first meridian. In England, the meridian of the observatory at Greenwich is generally taken for the first meridian. Various are the methods which have been proposed for finding the longitudes of places; in every point of view the subject is one of very considerable interest, not only on account of its great importance in commerce and science, but also because the attempts which have for so many years been made, in order to determine the longitude with the same accuracy with which the latitude of places is found, have hitherto been unsuccessful. Since the time of Queen Anne it has been regarded as an object of great national importance; and a board, called the Board of Longitude, consisting of various official and scientifick persons, was then established for the purpose of encouraging and directing attempts to determine it.

All the methods for finding the longitudes depend upon the manner in which time is measured; and in order to attain a clear notion of them, it will be proper to explain at some length how a measure of time is obtained.

Properly considered, time is, in itself, without parts, and indivisible; the flow or lapse of time is, however, capable of being measured by means of events happening in time, and which, when compared one with another, are of different continuance, taking up more or less time in their completion. Time and space are in one respect similar; space is in its nature indivisible, it does not contain within itself any marks or circumstances of division; but by means of bodies which are situated within it, we are able to consider space as though it were divided into parts. What bodies are, in this respect, to space, that precisely are events to time; they afford us the means of measurement. This is done by the comparison of those events one with another in respect of their duration; but in order to do this with accuracy, it is necessary to possess some *standard event* which always takes up exactly the same time, and to which we may refer as affording, by comparison with it, a measure of the duration of all other events: without this we should be at a loss to ascertain exactly how much time is taken up by any other event, and be left to the uncertainty of only probable conjecture. In this particular there is also a similarity between time and space; for, in measuring space, the object has been, even in remote periods of history, to fix upon a certain standard. Thus our king Henry the First commanded that the standard of measure of length should be of the exact length of his own arm, which is our present yard measure. But with him perished the standard by which the measure called a yard might afterwards be compared, corrected, and ascertained afresh. It is clear that something which was liable neither to decay nor variation was requisite to form a proper standard of measure; and accordingly by the recent Act of Parliament for weights and measures, and which proceeds upon more scientifick principles, such a standard has been established in the length of a pendulum beating seconds of mean time in the latitude of London. On observing the various occurrences or events in nature, with a view to fix upon some one event, as a standard for the measure of time, it was discovered that the motion of the earth round its axis possessed all the qualifications requisite for such a purpose. This event is invariably of exactly the same continuance, and it is the only one in nature with which we are acquainted, that is so. The time spent in one revolution of the earth round its axis forms, therefore, an exact and perfect standard measure, by reference to which the time taken up by all other events may be ascertained. The beginning and the end of the revolution, and consequently the duration of it, is determined by means of the fixed stars: these stars have no motion of their own; so that their apparent daily motion is caused by the daily motion of the earth on its axis. Hence, if a fixed star be upon the meridian of a place, this motion of the earth, which is in a direction from *West to East*, gives to the star an *apparent* motion towards the *West;* and when the star next appears upon the same meridian, having moved through 360°, an entire revolution of the earth has been accomplished. The time spent in performing this revolution is the standard measure of time, and it is called a *sidereal or star day*, because it is by the appearance and re-appearance of the same star in the same place in the heavens that the completion of the revolution is ascertained. This standard being once established, it may be divided into smaller portions of time at pleasure. Portions of time measured by a reference to this standard are called *sidereal time.* Astronomical clocks are made to show sidereal time.

But it was requisite, for the sake of convenience, to obtain some other standard of measure of time, having reference to the sun, by which the common affairs of life are regulated. Now the same motion of the earth about its axis, which has already been noticed with respect to the fixed stars, gives to the sun also an apparent daily motion from the east towards the west. When the sun is upon the meridian of a place it is *apparent noon* at that place, or, in popular language, the hour of twelve in the day. After this hour, the sun, leaving the meridian, appears gradually to travel towards the west. This westerly motion continues below the horizon until it has brought the sun to a point where it rises again, and proceeding in its daily course, again reaches the same meridian on which it appeared at the hour of apparent noon on the former day. The time which has passed between these two successive appearances of the sun on the meridian of any place is called a solar day. A solar day is longer than a sidereal day; for if upon any day the sun and a fixed star be observed to be upon the meridian of a place together, the star will, on the following day, return to the meridian a few minutes before the sun. This difference in the times of the sun and a fixed star leaving and returning to a particular meridian, is caused by the sun's apparent yearly motion in the ecliptick, which being in a direction from *west to east*, and opposite to that daily motion which brings it to the meridian, makes the star, which has only the daily motion, from *east to west*, to appear on the meridian before the sun. The daily *average* amount of this yearly motion of the sun in an *easterly* direction *away from a meridian*, is 59′ 8″ (nearly one degree).

We have called this 59′ 8″ the daily *average* amount of the sun's yearly motion, because, during some parts of the year, it is more than 59′ 8″, and at others less. Hence it follows, that the intervals of time, which in the course of a year elapse between the sun's successively leaving and returning to the same meridian, are of different lengths. An *apparent* solar day, therefore, or the time between two active successive passages of the sun over the same meridian, could not be adopted as a standard measure of time, because it is a varying, fluctuating quantity; and it is essential to a standard measure of time, that it should be a fixed quantity. But with a view to obviate this difficulty, an *artificial* solar day has been constructed, called a *mean* solar day, *the length of which is always the same*, and is the *mean* or *average* length of all the various *apparent* solar days in the course of a year; the difference in length between a mean solar day and the apparent solar day for the time being, is called the *equation of time*.

When time is reckoned with reference to the apparent solar day, it is called *apparent* time; when with reference to the mean solar day, it is called *mean time*. A common sun-dial shows the hour of apparent time. Time-keepers or chronometers, common watches and clocks, are made to show the hour of mean time. Both the apparent solar day, and the mean solar day, are divided into 24 hours; and are, for astronomical and scientifick purposes, reckoned from noon to noon. The mean day is always of the same length, and although it is longer than the sidereal day, yet the quantity by which it is greater (viz. the time required for the earth by its motion on its axis to move through 59′ 8″ of space) is always the same.

Hence, the uniformity and equal length of mean days, and of seconds of mean time, really depend upon, and must at last be referred to the uniform and equal motion of the earth upon its axis, which consequently is the standard, by reference to which, the measure of time afforded by the pendulum beating seconds of mean time is ascertained, and may be corrected. It is not uninteresting to observe, that to the equable and invariable motion of the earth about its axis, we are indebted, not only for a standard measure of time, but also for all our standard measures of length, capacity, and weight; since, by the recent Act of Parliament, before referred to, all of them are referred to the length of a pendulum beating seconds of mean time in the latitude of London.

At four times in the year, and only four,—that is, on or about the 15th day of April, and the 1st of September; and on or about the 15th of June, and the 24th of December,—mean time and apparent time agree; or, which is the same thing, on these four days the sun is actually upon the meridian of some particular place, and the shadow of the style of a dial at that place is upon the hour of twelve, at the very moment that a correct time-keeper, or watch measuring mean time, and adjusted for this particular place, shows the hour of 12. Throughout the rest of the year, apparent time and mean time are different. The exact amount of this difference is easily calculated for every day: it is called the *equation of time;* because, by either adding it to, or substracting it from, the time of the apparent solar day, the result will be, the time of the mean solar day. The equation of time is given for every day in the year in the English Nautical Almanack, with directions, showing whether it is to be added to or substracted from the *apparent* time, in order to get at the mean time.

VARIOUS METHODS OF FINDING THE LONGITUDE.

In the application of the above-mentioned principles for reckoning the time of the day, consists the simplest method of finding the longitude of a place, or its situation in a given parallel of latitude with respect to the first meridian, the meridian of Greenwich.

As in the 24 hours into which an *apparent* solar day is divided, the sun returns to a meridian which it has left, it may be said to describe, in that time, 360 degrees of longitude; which, dividing the whole 360° by 24, and supposing the motion to be uniform, is at the rate of 15° of longitude for every hour of apparent time; so that if we find the sun to be upon the meridian of Greenwich, or it is 12 o'clock apparent time at Greenwich, it will, in one hour after of apparent time, be 15° to the west of Greenwich, in 2 hours 30° west, in 6 hours 90°, in 12 hours 180°, and so on, at which several times in succession the sun will be upon the meridians of places, or it will be apparent noon, or 12 o'clock at places situated 15°, 30°, 90°, and 180° west longitude from the meridian of Greenwich; while the several corresponding hours of apparent time at Greenwich will be 1 o'clock in the afternoon, 2 o'clock, 6 o'clock, and 12 o'clock at night, or midnight.

Beyond the 180° west longitude, east longitude commences. The only difference in the two cases is, that places to the west of Greenwich are said to have their noon later, and their reckoned time earlier: those to the east have their noon earlier and consequently their reckoned time later than at Greenwich. Hence, if, when it is the hour of apparent noon at any place situated either to the east or west of Greenwich, the corresponding hour of apparent time at Greenwich could be ascertained, the longitude of that place might be directly found by turning the difference of their times into degrees and parts of degrees, reckoning 15° for every hour of apparent time, and for proportionate parts of an hour taking proportionate parts of 15°.

But, as it has been already explained, the variation of the apparent solar day makes apparent time ill adapted as a standard to refer to for the purpose of ascertaining the difference of longitudes by the difference of the apparent times at two different meridians: it is necessary, therefore, to show how the difference of the mean time at two different meridians may be substituted in its stead. It has been stated that, at four times in the year, the equation of time is nothing, or that at some particular moment of four days in the year the hour of mean time exactly corresponds with the hour of apparent time. Thus, it appears, from the Almanack, that on the 24th of December of the present year, at the hour of apparent noon, when the sun will be on the meridian of Greenwich, the apparent time will be in advance of the mean time at Greenwich by 20″.3, that is, when it is 12 o'clock in the day, by the sun, it will want 20″.3 to 12 o'clock by the watch; so that it will be then necessary to substract 20″.3 from the apparent time deduced from observation in order to ascertain the corresponding mean time at Greenwich for that day. But on the 25th of December, or at the hour of apparent noon at Greenwich on the following day, the apparent time will be *behind* the mean time by 9″.8, which quantity therefore must then be *added* to the apparent time to get at the mean; and the watch will be 9″.8 past 12, when it is noon by the sun. Hence, as in the space between these two successive passages of the sun over the meridian of Greenwich; the equation of time, or the difference between apparent and mean time, has, from being substractive, become additive, it has, at some moment of that interval, been 0, or has passed through 0; or, in other words, the mean time at Greenwich having overtaken the apparent time at that place, the hour of apparent time, and that of mean time will, for some one moment, between the two successive noons, be the same. Now, as the difference between mean and apparent time, or the equation of time, depends upon the variable velocity of the sun in his apparent annual motion in the ecliptick, and upon the obliquity of the ecliptick or the angle it makes with the equator; these circumstances being independent of place, the equation of time is for all parts of the earth the same that it is at Greenwich at any given moment. Hence, as at some particular moment between the noons at Greenwich of the 24th and 25th of December, the equation of time is nothing, at that moment it is also nothing at every other place upon the globe, or the apparent and mean times are then every where exactly the same. But we have already proved that the longitude might always be determined by turning the *difference of the apparent times* at Greenwich and any other place into degrees at the rate of 15° to every hour of apparent time. At the particular moment, however, when the equation of time is 0, the difference of the apparent times is the same with the difference of the mean times at Greenwich and every other place upon a different meridian. Hence, at this moment the longitudes of all places may in like manner be determined by turning the *difference of mean times* at Greenwich and at all other places into degrees at the same rate of 15° for every hour of mean time. But what is true of mean time and of the difference of mean times at one particular moment, is true always, because mean time is not variable; so that the difference of mean times at Greenwich and all other places will always give the longitudes of places; and therefore by knowing on any day in the year the mean time at Greenwich, and also the corresponding mean time at any other place, the longitude of that place will be found by converting the difference of their reckoned mean times into degrees, at the rate of 15° for every hour of mean time; it will be east longitude if the time at the place in question be later than the time at Greenwich, and west longitude if it be earlier.

All, therefore, that is required is to ascertain, 1st, the hour of mean time at the place, the longitude of which we wish to know; 2dly, the corresponding hour of mean time at Greenwich. Now the hour of mean time at any place may always be obtained by means of the corresponding *apparent* time, by adding to or substracting from it the equation of time for the moment, which is given (or may be computed from what is given) in the Nautical Almanack. The hour of *apparent* time may always be found by means of an observed altitude of the sun, or, if the place be on land, by means of a sun-dial. The corresponding mean time at Greenwich may then be ascertained by a chronometer or time-keeper, adjusted and regulated so as to show Greenwich mean time. If, therefore, a time-piece could be made so perfect as always to show the mean time at Greenwich without errour; or if its errour in going were always the same, that is, if it gained or lost the same quantity every day, the longitude of places might be correctly found by such a chronometer.

This desirable object has not hitherto been attained: the most ingenious and accomplished mechanicks, although prompted by the liberal rewards held out by the legislature to encourage their exertions, have failed of complete success. Time-pieces have, however, been made, which from their near approach to an equable rate of going, might appear to justify even sanguine hopes that at some period or other a *perfect* machine may be constructed; but it is highly improbable that these hopes will ever be realized. The imperfection of the human mind seems to oppose even a moral obstacle to the attainment of absolute perfection in any of its productions. In other works of art an apparent perfection may be obtained, because their defects are not visible to our senses, and we have no other means of ascertaining their existence; but in a machine which is to measure time, the smallest errours accumulate so as to become at last apparent, and in the daily equable motion of the earth on her axis, nature herself affords a perfect measure of time, by a comparison with which the errours and defects of the measure constructed by human art cannot in the long run escape detection.

At sea, where other methods cannot be resorted to with facility, chronometers are generally used for finding the longitude; but the mere circumstance that the best chronometer is liable to errour, and to errour which may escape notice, makes it dangerous to trust to the chronometer alone; nor ought it to be relied on but under circumstances excluding the adoption of some of the other methods of finding the longitudes.

These methods, therefore, form the next subject of consideration.

There are various appearances from time to time taking place among the heavenly bodies, that afford the means of finding the longitude nearly. These appearances are the following: 1st, Eclipses of the moon; 2d, Eclipses of Jupiter's satellites or moons; 3d, Occultations or concealments of fixed stars, by the moon's passing over them; 4th, Eclipses of the sun; 5th, The passage of the moon over the meridian of the place the longitude of which is required; 6th, The same passage compared with that of one or more stars immediately preceding or following the moon, and having nearly the same declination; 7th, The distance of the moon from particular fixed stars or from the sun. There is also another method, of limited application, by means of artificial appearances upon the earth, as explosions of gunpowder made at one place and seen at another, the longitude of which is required.

The first and second and the last of these appearances are observed at all places where they happen to be visible at the same instant of *absolute* time. The difference, therefore, in the reckoned times, either mean or apparent, at two places where they are visible, is owing to the difference of their longitude. The time at Greenwich of eclipses of the moon and of Jupiter's satellites is previously computed and set down in the Nautical Almanack, and the corresponding time at the place whose longitude is wanted, being obtained at the moment of these appearances happening, the difference turned into degrees in the usual way is the longitude. By means of explosions of gunpowder or other signals made on the earth, the difference of the longitudes of any two places not far distant from each other may be determined with very great exactness; the mean time for each place may be known by separate chronometers previously adjusted and regulated for the purpose; the difference of the times at the moment of the explosion or other signal, which is made at one place and seen instantaneously at the other, converted into degrees, will give the difference of longitudes. This method has of late become the more interesting from its having been adopted, in the course of the operations now in progress on the continent for measuring an arc of a parallel of latitude, as the best means of determining the longitude of the extremities of the arc. The space between the two extremities of this arc was divided into a great number of smaller arcs, all of such a length, that one of the extremities of each smaller arc might be made visible to an observer at the other extremity. At each point of division of the principal arc, were fixed stations, at which the requisite instantaneous signals were made and observed. The difference of times when these signals were made at one station and observed at another, gave the difference of longitudes of the extreme points of every smaller arc; and the sum of all the differences gave the difference of longitudes of the extremities of the principal arc. It is scarcely necessary to remark, that any thing answering the purpose of an instantaneous signal, may be used instead of explosions of gunpowder—such as the discharge of a rocket, or the sudden display or extinction of a lamp; a contrivance called a Heliostat (which is from two *Greek* words, and signifies any thing the position of which has some reference to the sun) has been employed on the continent: it has a strongly reflecting surface, and is placed in such a manner that the rays of the sun are reflected by it towards the desired point of observation; the reflection is then made to disappear suddenly by interposing a screen between the Heliostat and the distant spectator, and thus conveys an instantaneous signal.

The third and fourth methods, by occultations of fixed stars, by the moon, and by eclipses of the sun, likewise depend upon the difference of the times at which these appearances take place at Greenwich (and which times are computed by means of tables); and of the times at which they are actually observed to take place at the spot the longitude of which is required; but with this qualification, that as these appearances are not observed at all places at the same point of *absolute* time, the difference in the absolute times of their happening must be allowed for: thus, if at Greenwich the occultation of a certain fixed star by the moon, happen at six o'clock in the morning; and at some other place to the west of Greenwich it be observed to happen at midnight, thus making a difference of six hours in the reckoned times of the appearance, it will not follow that this is all due to the longitude, and that the place in question is 90° west longitude, for the occultation does not happen at both places at the same moment of absolute time; but the star is seen at the place in question for some time after it is hidden at Greenwich. This time, which being caused by parallax may be computed, must be added to the Greenwich time, computed from the tables; and then the difference between the resulting time at Greenwich, and the time at the place at the moment of the occultation *there*, will give the true difference of corresponding reckoned times between that place and Greenwich; and from this difference the longitude may be deduced. The difference in the absolute time of these appearances occurring at different places, is owing to the sun and fixed stars shining by a light of their own, and to the moon's parallax.

The fifth method is by means of the moon's passage over the meridian.

If the sun and moon be upon the meridian of Greenwich together, on any particular day, on the following day when the sun is again on that meridian, the moon will be considerably to the *east* of it; and some time will consequently elapse before the moon reaches the meridian of Greenwich after the sun has left it. This *easterly* separation of the moon from the sun after they have been together, is caused by the moon's quicker motion in her orbit or course round the earth; and the time which elapses between the passage of the sun over the meridian of Greenwich, and that of the moon, is called the moon's retardation. The moon's motion in her orbit continuing, the distance between the sun and moon continually and gradually increases; so that if the moon's retardation be of a certain amount at the time of its passing the meridian of Greenwich, the retardation at a place to the *west* of Greenwich will be of a greater amount, in proportion to the time that is required to bring the moon from the meridian of Greenwich, to the meridian of the place to the west of Greenwich. Hence, as the increase of the moon's retardation is for 24 hours proportional to the times in which it is produced, by knowing the retardation at two different meridians, and the time during which the retardation at one of the meridians has been produced, the time during which the greater retardation at the other meridian has been produced, may be found by the rule of three. Thus, suppose that the sun and moon having been upon the meridian of Greenwich together on one day, the retardation of the moon at Greenwich on the following day, or in 24 hours, is 52′; that at a place to the west of Greenwich the retardation of the moon is observed to be 57′, or 5′ more than it was at Greenwich; then we shall have this proportion; as 52′ : 57′ : : 24 hours : 24 hours + the additional time necessary to produce the additional retardation of 5′. This additional time is due to and expresses the difference of the longitudes, and 24 hours correspond with 560° of longitude. Hence, 52′ of time : 57′ of time : : 360° : 360° + difference of the longitudes; and as in this case we have taken the meridian of Greenwich, the longitude of which is 0, we shall have 52′ of time : 57′ of time : : 360° : 360 + longitude of the place; or the longitude of the place is equal to $360 \times \frac{5'}{52'}$ of time, and expressing the time in parts of degrees at the rate of 15° to an hour, the longitude is obtained. Hence generally the longitude of a place is equal to 360°, multiplied by the difference between the retardation of Greenwich and the retardation of the place the longitude of which is required, divided by the increase of the retardation at Greenwich in the 24 hours preceding the time of observation. The increase of retardation at the place the longitude of which is required, is known from observation. The increase of retardation at Greenwich, for the 24 hours preceding, may be found by means of the Nautical Almanack.

The principle of this method is applicable to the fixed stars as well as to the sun; the only difference being, that the moon's retardation is greater with respect to the fixed stars, as they have none of the daily easterly motion which the sun has in its apparent yearly path in the heavens. The application of this principle to the fixed stars for finding the difference of the longitudes of two places, was first successfully made by M. Nicolai, a distinguished astronomer, at Manheim, and is now very generally practised on the continent. Mr. Francis Baily, in his valuable paper on this subject, lately published in the Memoirs of the Astronomical Society of London (vol. ii.), observes, "That already at several observatories, the observers have been enabled to determine their difference of meridians in a few months with as much accuracy as they formerly could in as many years." The improvement introduced by M. Nicolai consists in the choice of those stars which have very nearly the same declination or distance from the equator as the moon, and which pass the meridian very soon after, or a little before the moon. The advantages of the method are to be found in avoiding a great number of errors and troublesome calculations, which in practice were found to detract from the value of other methods, and in the frequency with which observations may be made, being every night that the moon is visible. It was employed with very great success by Lieutenant Foster on Captain Parry's last voyage but one, in determining the longitude of Port Bowen in Prince Regent's Inlet. His observations have been calculated and compared with those made at the observatories of Greenwich and Dublin, and by the late Colonel Beaufoy at Bushy Heath; and the results, which will appear in a volume of the Astronomical Society's Memoirs, show, as far as one example can do so, the great value of this method of determining the longitude on land.

None of the previous methods, however, (except that which consists in the use of chronometers,) are adapted to the situation of a person on board a ship. The late Astronomer Royal, *Dr. Maskelyne*, in his Preface to the *Nautical Almanack*, observes "It was hoped that some means might be found of using proper telescopes on shipboard to observe these eclipses, [the eclipses of Jupiter's Satellites]: and could this be effected, it would be of great service in ascertaining the longitude of a ship from time to time. In my voyage to Barbadoes, under the directions of the *Commissioners of Longitude*, in 1763, I made a full trial of the late *Mr. Irwin's* marine chair proposed for the purpose, but could not derive any advantage from the use of it;

and considering the great power requisite in a telescope for making these observations well, and the violence as well as irregularities of the motion of a ship, I am afraid the complete management of a telescope on shipboard will always remain among the desiderata."

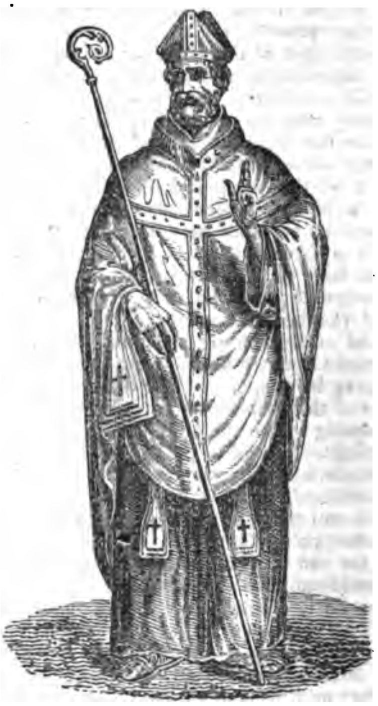
The longitude may, however, be found at sea, when the moon is visible, by the observed distance of the moon either from the sun or from nine of the principal fixed stars mentioned in the *Nautical Almanack*. This distance is observed by means of a Hadley's Sextant. In consequence of the moon's quick motion in her orbit she is every moment changing her situation in the heavens with respect to the sun and stars. Her distance, therefore, from the sun, or a particular star, is at one moment of time different from what it was at the previous moment, and what it will be at the next; so that a particular or given distance is proper or due to a given moment, which moment will be expressed or reckoned differently at different meridians, according to the apparent time of day. This difference in the apparent times, being therefore due to the difference of meridians will, converted into degrees, give the longitude. The distance of the moon from the sun, and from nine principal fixed stars, is given in the *Nautical Almanack*, for every three hours of Greenwich time.

This distance is such as it would appear at the centre of the earth; allowance having been made in computing the distance given in the Almanack as well for parallax as for refraction. The *observed* distance at the place the longitude of which is required, is in a similar manner to be reduced to the centre of the earth by correcting for the moon's and sun's parallax, and for refraction. The apparent time, at the place and moment of observation, is obtained in the usual manner, by taking the contemporary altitude of the sun or star. The difference between this apparent time and the apparent time at Greenwich, given in the tables as corresponding to the *same distance*, converted into degrees, will be the longitude of the ship. This method of finding the longitude is called the lunar method; it will generally give the longitude to within twenty miles, frequently much nearer; it was brought into general use by the exertions of Dr. Maskelyne, who, on his voyage to St. Helena, in the year 1781, employed it with great success.

The latitude and longitude of a place having thus been ascertained, the exact position of that place on the surface of the globe is determined.

COSTUME OF AN ENGLISH MITRED ABBOT.

Abbot is the title of the superiour of certain establishments of religious persons of the male sex, thence called Abbeys. The word *Abbot*, or *Abbat*, as it has been sometimes written, comes from *Abbatis*, the genitive of *Abbas*, which is the Greek and Latin form of the Syriac *Abba*, of which the original is the Hebrew *Ab*, father. It is, therefore, merely an epithet of respect and reverence, and appears to have been at first applied to any member of the clerical order, just as the French Pere and the English Father, having the same signification, still are in the Catholic Church. In the earliest age of monastick institutions, however, the monks were not even priests; they were merely holy persons who retired from the world to live in common, and the abbot was that one of their number whom they chose to preside over the association. In regard to general ecclesiastical discipline, all these communities were, at this time, subject to the bishop of the diocese, and even to the pastor of the parochial district within the bounds of which they were established. At length it began to be usual for the Abbot, or, as he was called in the Greek Church, the Archimandrite (that is the Chief Monk,) or the Hegumenos (that is the Leader,) to be in orders; and since the sixth century monks generally have been priests. In point of dignity an abbot is considered to stand next to a bishop; but there have been many abbots in different countries who have claimed almost an equality in rank with the episcopal order. A minute and learned account of the different descriptions of abbots may be found in Du Cange's Glossary, and in Carpentier's Supplement to that work. In England, according to Coke, there used to be twenty-six abbots (Fuller says twenty-seven,) and two priors, who were Lords of Parliament, and sat in the House of Peers. These, sometimes designated Sovereigns, or General Abbots, wore the mitre (though not exactly the same in fashion with that of the bishops, carried the crosier (but in their right hands, while the bishops carried theirs in their left,) and assumed the episcopal style of Lord. Some crosiered abbots, again, were not mitred, and others who were mitred were not crosiered. Abbots who presided over establishments that had sent out several branches, were styled Cardinal-Abbots. There were likewise, in Germany, Prince-Abbots, as well as Prince-Bishops. In early times we read of Field-Abbots (in Latin, *Abbates Milites*) and Abbot Counts (*Abba-Comites*, or *Abbi-Comites*.) These were secular persons, upon whom the sovereign had bestowed certain abbeys, for which they were obliged to render military service as for common fiefs. A remnant of this practice appears to have subsisted in our own country long after it had been discontinued on the continent. Thus, in Scotland, James Stuart, the natural son of James V., more celebrated as the Regent Murray, was, at the time of the Reformation, Prior of St. Andrew's, although a secular person. And the secularization of some of the German ecclesiastick dignities has since occasioned something like a renewal of the ancient usage. We have in our day seen a prince of the House of Brunswick (the late Duke of York) at the same time Commander-in-Chief of the British army and Bishop of Osnaburg. The efforts of the abbots to throw off the authority of their diocesans long disturbed the church, and called forth severe denunciations from several of the early councils. Some abbeys, however, obtained special charters recognizing their independence; a boon which, although acquired at first with the consent of the bishop, was usually



defended against his successors with the most jealous punctiliousness. Many of the abbots lived in the enjoyment of great power and state. In ancient times they possessed nearly absolute authority in their monasteries. 'Before the time of Charlemagne,' says Gibbon, 'the abbots indulged themselves in mutilating their monks, or putting out their eyes; a punishment much less cruel than the tremendous *vade in pace* (the subterraneous dungeon, or sepulchre), which was afterwards invented.' The picture which this writer draws of what he calls 'the abject slavery of the monastick discipline' is very striking. 'The actions of a monk, his words, and even his thoughts, were determined by an inflexible rule, or a capricious superiour: the slightest offences were corrected by disgrace or confinement, extraordinary fasts, or bloody flagellation; and disobedience, murmur, or delay, were ranked in the catalogue of the most heinous sins.' The external pomp and splendour with which an abbot was in many cases surrounded, corresponded to the extensive authority which he enjoyed within his abbey, and throughout its domains. St. Bernard is thought to refer to the celebrated Luger, Abbot of St. Denis, in the beginning of the twelfth century, when he speaks, in one of his writings, of having seen an abbot at the head of more than 600 horsemen, who served him as a cortege. 'By the pomp which these dignitaries exhibit,' adds the Saint, 'you would take them, not for superiours of monasteries, but for the lords of castles,—not for the directors of consciences, but for the governours of provinces.' This illustrates a remark which Gibbon makes in one of his notes:—'I have somewhere heard or read the frank confession of a Benedictine Abbot, "My vow of poverty has given me 100,000 crowns a year, my vow of obedience has raised me to the rank of a sovereign prince."' Even in the unreformed parts of the continent, however, and long before the French Revolution, the powers of the heads of monasteries, as well as those of other ecclesiastical persons had been reduced to comparatively narrow limits; and the sovereignty both of abbots and bishops had been subjected in all material points to the authority of the civil magistrate. The former became merely guardians of the rule of their order, and superintendents of the internal discipline which it prescribed. In France this salutary change was greatly facilitated by the concordat made by Francis I. with Pope Leo X., in 1516, which gave to the king the right of nominating the abbots of nearly every monastery in his dominion. The only exceptions were some of the principal and most ancient houses, which retained the privilege of electing their superiours. The title of Abbot has also been borne by the civil authorities in some places, especially among the Genoese, one of whose chief magistrates used to be called the Abbot of the people. Nor must we forget another application of the term which was once famous in our own and other countries. In many of the French towns there used, of old, to be annually elected from among the burgesses, by the magistrates, an Abbe de Liesse (in Latin, Abbas Lætitiæ,) that is, an Abbot of Joy, who acted for the year as a sort of master of the revels, presiding over and directing all their publick shows. Among the retainers of some great families in England was an officer of a similar description, styled the Abbot of Misrule; and in Scotland the Abbot of Unreason was, before the Reformation, a personage who acted a principal part in the diversions of the populace, and one of those whom the zeal of the reforming divines was most eager in proscribing.

CHEERFULNESS.—A cheerful temper, joined with innocence, will make beauty attractive, knowledge delightful, and wit good-natured. It will lighten sickness, poverty, and affliction, convert ignorance into an agreeable simplicity, and render deformity itself agreeable.

ASTRONOMY.

M. ARAGO ON DOUBLE STARS.

We make some extracts from the admirable memoir on double stars, contributed by M. Arago to the third number of the *Uranographie;* a subject of great interest to the scientifick world, as Sir J. Herschel's principal object in visiting the Cape is to examine the double stars in the southern hemisphere.

Triple Star in Monoceros.

Having explained, that by double, triple, or quadruple stars, astronomers mean groups of two, three, or four stars, which appear extremely close to each other, M. Arago proceeds to state the reason why this peculiarity has attracted the attention of astronomers.

"When we observe the heavens with a telescope, even in those regions where the stars are most abundant as in 'the milky way,' those stars within the field of vision are usually found distributed with considerable uniformity; the intervals by which they are separated are nearly equal and very great. The more general this rule was, the more forcibly did the exceptions arrest the attention of astronomers. How could they avoid remarking, for instance, that the star Castor, (*α Geminorum,*) which to the naked eye appears single, and is cited as such by the Greek and Arabian writers, is found, when examined by telescopes of high magnifying power, composed of two stars, one of the third, and the other of the fourth magnitude, placed almost in contact?"

Sir W. Herschel was the first astronomer who examined multiple stars with sustained attention; he classified the double stars according to the angular distance of the two stars; a system, however, that must soon be abandoned, for we shall soon see that this angular distance is subject to a considerable variation. We must however first notice another peculiarity.

"The two distinct stars of which double stars are composed have generally two very different intensities. It frequently happens that they are remarkable for a very decided difference of colour. (Thus, in the compound star *ι Cancri*, the larger is of a beautiful bright yellow, the smaller of a rich indigo blue colour.) Often the larger is ruddy or yellowish, still more frequently the smaller has a decided green or blue tinge. (In *δ Serpentis* both are blue.)"

When these observations were first made, astronomers, supposing that this difference of colour arose from difference of distance, deemed that by a simple process of observation the distance of the brighter star from the earth might be determined.

"This means, first proposed by Galileo, was put in practice by Dr. Long; Sir W. Herschel, a little later, applied it to the binary groups which had been already catalogued in his time, and which seemed to afford the most reasonable prospect of success; but, as happens to every body, though every body has not the candour to avow it, in looking for the one thing, the celebrated astronomer of Slough found another. He discovered that generally the grouped stars of unequal magnitude are not, as had been previously supposed, independent stars accidentally placed nearly in the same line of vision; that their close union is not a simple effect of perspective, but that a connexion exists between these stars; that they form actual systems, that their relative positions are incessantly changing, and finally, that the smaller stars revolve round the larger, precisely as the planets of our system revolve round the sun."

It might, perhaps, have been more mathematically correct to say, that both stars revolve round their common centre of gravity. But, as our author has well observed, ordinary astronomical observations make us acquainted only with the successive positions of the smaller star in reference to the larger; now, if we practically collect only the elements of a relative motion, the orbit calculated from these elements can only be a relative orbit; in fact, it will be the curve which the smaller star will seem to describe to an observer stationary in the larger. Just in the same way we trace the paths of the planets in our system, only in the Sun, without taking into account any independent motion which that luminary itself may have through the realms of space.

M. Arago then enters into a minute description of the micrometrical observations by which the orbits of these secondary stars, if so they may be called, are determined, and gives a table of the elements of a few of these binary systems, as determined by Savary, Bessel, Encke, and Sir John Herschel.

"Among these stars there is one (η *Coronæ*) which has completed its revolution since first Sir W. Herschel determined its angle of position.) It is already far advanced in its second revolution. The earliest observations on ξ *Ursæ Majoris*, considered as a double star were made in 1782. Its periodick time being fifty-eight years, the secondary star of ξ will have completed a revolution before our eyes in 1840.

"According to Sir W. Herschel, the star π *Serpentarii* is double. At the time when this celebrated discoverer first formed his catalogue of multiple stars, the two distinct stars of which π is composed were easily discoverable. At present, they are so completely confounded, one is so exactly projected over the other, that Struve himself, though furnished with Fraunhofer's great telescope, has not been able to discover the least trace of duplication. What would Bradley, Lacaille, and Mayer have said, if any one had told them that, in the firmament which they studied so diligently, there were stars that concealed each other? The very contrary of π *Serpentarii* is exhibited ζ *Orionis*. At the present day, it may easily be distinguished as a double star, but in Sir W. Herschel's catalogue it is entered as decidedly single.

"The branch of astronomy which treats of the displacements in the stellary system is of very recent origin; consequently we must not be astonished, that very little is yet known respecting the motions of triple stars. Observations, however, have shown already, that the two paler stars in ξ *Cancri* revolve round the principal stars in the group. As to ψ *Cassiopeæ*, which is composed of one very brilliant star, and two smaller stars very close to each other, it is probable that one of the latter will be found to revolve round the other, and both to revolve round the brighter one.

"Before passing to a different part of the subject, one other peculiarity in these binary systems deserves to be remarked, namely, the great eccentricity of the orbits of the secondary stars. By eccentricity is meant their difference from a circle, which is determined by the ratio between the distance of the centre from the focus of the ellipsis, and the semi-major axis. In ξ *Ursæ Majoris*, it is 0. 42, and in γ *Virginis*, it actually amounts to 0.83; now in the solar system, the eccentricity of Mercury is 0.21, of Pallas 0.24, of Juno 0.25, but in none of the other eight planets does it amount to 0.1. A plausible cause has been assigned for this remarkable difference. The masses of the planets of our system are but very small fractions of the mass of the sun; whilst in these binary systems, the satellite, and central star may be very nearly equal.

"We are next to examine what results have been derived from the observation of these extraordinary bodies. The most remarkable is the confirmation of the universality of the Newtonian law, that the attractive force of bodies varies inversely as the square of the distance. Several comparisons have been made between the calculated and observed positions of the secondary stars, and the differences have not passed the limits of errour which necessarily belong to this very difficult branch of micrometrical measurement.

"The existence of attraction in the system composed of the sun and the planets that surround it was an important fact, whose laws had been discovered, and whose consequences had been traced with wondrous success; but it did not thence follow that attractive force was inherent in matter, that large masses might not exist in other regions of the universe, which did not attract each other. Still less could we venture to pronounce on the generality of the law, that attractive force varies as the square of the distance. But now, thanks to the observations on double stars, these doubts are completely dissipated. More is not wanting to justify the lively interest that these variations in the relative position of the stars have excited among astronomers."

M. Arago next shows how the masses of these stars may be calculated, and explains at great length how astronomers are able to determine the mass, or, as we may call it, the weight of the celestial bodies. He justly says, that this is the most difficut part of astronomy to explain to the uninitiated. When a popular lecturer tells his audience, that if the sun were placed in one scale of a balance, it would require 337,000 globes like the earth to counterpoise it, a feeling of incredulity is manifested by the entire assembly, and his proofs are regarded as an ingenious piece of sophistry. Our author has, however, explained the entire process of reasoning, in language that any man of ordinary education can understand; and has thus done for the most difficult part of astronomy what Dr. Arnot has effected for physicks. It would be idle to extract a portion of the reasoning, because it is intelligible only as a whole.

M. Arago then explains how, from observations on the rotations of the binary systems, the distances of the stars may be determined, and speculates on the probability of the limits of errour in the position or distance of the stars being greatly diminished at some future period. He then examines the value of double stars, as a test of the goodness of telescopes, and explains the use he has made of the doctrine of chances, or, as it might be better named, the calculus of probabilities in his astronomical reasonings. He concludes with some brief speculations on the nature of nebulous stars, and states his opinion, that the recently noticed phenomenon of the Zodiacal light seems to prove the existence of a solar atmosphere.

We have omitted our author's speculations on the difference of colour in the stars that form binary groups, because they are merely speculations, and because information on this very curious subject may soon be expected from Sir John Herschel. In a catalogue published by Mr. Dunlop in 1828, we find a group of stars of about three minutes diameter described in the southern celestial hemisphere, all of which are blue; the same astronomer describes also some stellar nebulæ of a blueish tinge, and remarks, that no similar phenomena have been observed on this side of the equator. These facts, as well as the case of δ *Serpentis*, prove that the blueish colour of certain stars is not an optical illusion. To the theory that these blue stars are suns in the process of being burned out, it may be replied, that a blue colour was not observed in the new star of 1572 at the time of its greatest incandescence (November, 1572) it was of a brilliant white; in the following January it was changed to yellow, subsequently it was a dull red, and just before its total disappearance its light resembled the livid paleness of the planet Saturn.

Double Star Epsilon Bootes.

THE PLURALITY OF WORLDS.

If we find among these distant groups or systems of suns, the same equal description of areas, and the ratio of periodick times, we conclude that the stars of each system attract one another; that the force by which they are attracted varies inversely as the square of the distance, and is, therefore, similar to gravity; and lastly, that motion is there governed by the same laws as here. Now we do find this to be the case. The motions of double stars have been very accurately observed, among others, by Sir J. Herschel; and he has ascertained that their motion is subject to these laws. He has accurately determined their periodick times, the axes majores, and eccentricities of eight of them; and in every respect does he find the relations which exist between the planetary motions, to obtain among the bodies which compose these far remote systems. What, then, is the conclusion?—that all these multiplied and isolated systems which people space, and of which the universe is the aggregate, are subject to the same laws of motion and force as obtain here. Thus the laws of gravitation and motion, which Newton showed to embrace at once the fall of bodies at the earth's surface, and the phenomena of our planetary system, must be extended to the region of the fixed stars, and are universal. With us all matter is crowded with life, every interstice in it is but the habitant of some organized living agent, or the space wherein some form of vegetable life develops itself. Now the matter of the planetary bodies is analogous to ours in every other respect, why not in this too, that it is the appointed dwelling-place of organized living beings? and if of the subordinate classes of these, why not of intelligent living beings? Surely, in the absence of all evidence of an opposite state of things, we are bound to conclude far the most reasonable supposition to be, that our planet, which is in every other respect a sample of the other bodies of our system, resembles them in this also; they, as well as ourselves, have their day and night, their summer and their winter; why, as with us, should not these changes be coupled with the phenomena of animal and vegetable life? What a prodigious field of speculation is thus opened to our view? Mercury, for instance, completes his year in about one quarter of ours, and he receives about seven times as much heat from the sun. What, then, is the vegetation, and what the class of living beings suited to this rapid change of seasons and glowing temperature? Jupiter's year is nearly twelve of ours, and each of his seasons is thus three years in length; what gigantick vegetation is that which goes through this toilsome period of change? His day is about ten hours long. What development of animal life is that whose periods of repose come more than twice as frequently as our own? Four bright moons illuminate the short night of this planet. Why is this short period of repose brightened almost into day-light? But if it be by far the most probable of the two hypotheses to suppose that the planets of our own system, because of the analogy they bear in other respects to our own planet, display with it the wonders of animal and vegetable creation, then must the planetary systems which unquestionably surround the stars, too, having a direct analogy to those of our system, be admitted to be, like them, but the means, but the agents in the dissemination of life through all space; thus all the boundless fields through which the stars of heaven take their course, are peopled with beings who bow before God in speechless thanksgiving for the enjoyment of the blessing of life, or whose privilege it is to offer to him the incense of reason and of the understanding.—*Mr. Mosley's Introductory Lecture on Astronomy at King's College, reported in the London Athenæum.*

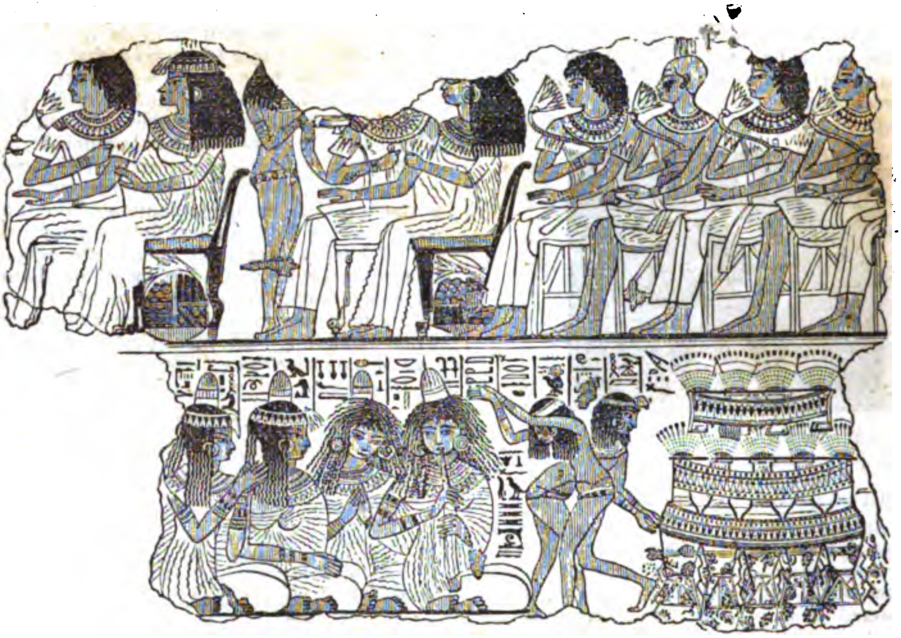
SUNSET ON THE ALLEGANY.

By Mrs. Sigourney.

I was a pensive pilgrim, at the foot
Of the crowned Allegany,— when he wrapt
His purple mantle gloriously around,
And took the homage of the princely hills,
And Ancient forests,—as they bow'd them down,
Each in his order of nobility,
And then, in glorious pomp the sun retired
Behind the solemn shadow, and his train
Of crimson, and of azure, and of gold,
Went floating up the zenith, tint on tint,
And ray on ray,—till all the concave caught
His parting benediction.
But the glow
Faded to twilight, and dim twilight sank,
In deeper shade,—and there that mountain stood
In awful state, like dread ambassador
"Tween earth and heaven. Methought it frowned severe
Upon the world beneath, and lifted up
The accuser's forehead sternly toward the sky,
To witness 'gainst its sins. And is it meet
For thee,—thou raised on cloud-capped pinnacle,
To scorn thine own original, the dust,
That sometimes eddying on the angry winds
Doth sweep thy base!
Say is it meet for thee,
Hiding thyself in mystery, to impeach
This nether sphere, from whence thy rocky root
Draws strength and nutriment?
But lo! a star,
The first fair herald of advancing night,
Doth peer above thy summit,—as some babe
Might gaze with brow of timid innocence
Over a giant's shoulder. Hail, lone star!
Thou friendly watcher o'er an erring world,
Thine uncondemning glance, doth aptly teach
Of that untiring mercy which vouchsafes
Thee light, and man, salvation. Not to mark
And treasure up his follies, or recount
Their secret record in the court of heaven,
Thou com'st. Methinks thy tenderness would shroud,
With trembling mantle, his infirmities,
The purest natures are most pitiful;
But they who feel corruption strong within,
Do launch their darts most fiercely at the trace
Of their own image in another's breast.
Thus the wild bull, that in some mirror spies
His own mad visage, furiously destroys
The frail reflector. But thou stainless star,
Shalt stand a watchman, on Creation's walls,
While race on race their little round shall mark,
And slumber in the tomb. Still point to all
Who through this evening scene may wander on,
And from yon mountain's proud magnificence,
Turn to thy milder beauty,—point to all,
The eternal love that nightly sends thee forth,
A silent teacher of its sacred love.

During the war of the Revolution, the following sentiment was ordered to be spoken by every soldier in the ranks of a certain company; "May the alliance between France and America be perpetual." A Dutchman in the ranks gave birth to much merriment by pronouncing it according to his version, as follows: "May all de liars in France be call Peter." M. A. E.

Sparing justice feeds iniquity.—Shak.



THE ABABDE.

The Ababde are several African tribes, which occupy the country between the Nile and the Red Sea, South of Kosseir, nearly as far as the latitude of Derr, 22° 47′. The Bisharye inhabit the Mountains from thence Southwards. Many of the Ababde have settled in Upper Egypt, on the east bank of the Nile, from Kenneh to Assouan, and thence to Derr. According to Belzoni, some of them are spread as far as Suez. But the greater part still live like Bedouins, and act as guides to the Sennaar caravans which set out from Daraou, a place about ten hours' journey north of Assouan. The Ababde formerly guarded the caravans from Kenneh to Kosseir, on the Red Sea; but they have been deprived of this branch of profit by the Maazu and Atony Arabs, who live to the north, and form the profits of this line of road from the Pasha.

The Ababde have considerable property, but a very bad character; they are described as faithless, and unworthy of the Bedouin origin of which they boast.

These people are known in Upper Egypt for their excellent camels, but more particularly for their dromedaries.

They trade principally in senna leaves, and charcoal made of acacia wood, which is sent as far as Cairo. The Ababde have few horses; they fight with other Arab tribes upon camels. Their arms are a target, lance, and sword. They are divided into three principal tribes, El Fokara, El Ashabat, and El Meleykab.

Those who encamp with the Bisharye speak the language of the latter. The female children of the Ababde and Jaafere Arabs, as Burckhardt calls them, who inhabit the west bank of the Nile, south of Thebes, as far as the first cataracts, as well as the female children of all the people south of Kenneh and Esne to the borders of Sennaar, undergo the operation of excision, which was an old Egyptian custom. [Compare Strabo, p. 824, Casaub.] The Ababde fight naked, except that they have a rag or napkin round their waists. A fight which Burckhardt saw commenced with a shower of stones, for the repelling of which missiles their targets appeared very useful. The combatants on each side were about thirty; and the results were, three men slightly wounded, and one shield cleft in two.

The kind of head-dress which they wear is often seen on the Egyptian monuments, and a pretty correct notion of it may be formed from the above Egyptian painting, now in the British Museum.

The above account is from Burckhardt's *Travels in Nubia* (London, 1819), who appears, from this and other passages, to consider the Ababde as of Arab stock; but if this be his meaning, it seems to be incorrect. Other writers say that the Ababde, who are of the same family as their southern neighbours, the Bisharye, differ in appearance, habits and language from the Arabs. The latter fact might readily be established by a comparison of an Arabic and Ababde vocabulary; but we have not been able to find one of the latter language. That the Ababde have, at different periods, mixed with the Arabs is certain, and we believe have got their religion, such as it is, from the same nation. Their form, which is not that of the negro, their dark colour, and their long hair besmeared with grease, and hanging in ringlets, which have been compared in shape to corkscrews, show them to be of Nubian stock, and probably the remnant of a race long settled in these regions.

The fact of the Ababde being camel-breeders, and using them in battle, coincides singularly with the habits of the *Arabians*, as Herodotus calls them, who lived south of Egypt, and were in the army of Xerxes when he invaded Greece, B. C. 480.

It is conjectured by Ritter, that the Ababde, as well as the Bisharye, may be a remnant of that people, whom we hear of under the Roman Emperors by the name of Blemyes. We hear no more of the Blemyes after the Arab conquest of Egypt, but they appear under the general name of Bejas, as the great carriers between the Nile and Aidab on the Red Sea, and in fact as a commercial people. The Bisharye, the Ababde, Barabras, &c., may be considered as different branches of the Beja stock. What reasons Herodotus had for calling the camel-riding people south of Egypt by the name of Arabs, it is difficult to say: only we may observe, that Arabia, properly so called, was then very little known; and the word Arabs would be applied vaguely, and perhaps sometimes incorrectly, to many people, who lived a nomadick life. For many Ababde customs, see Belzoni's *Researches*, p. 309, 4to (See Ritter's *Geography*, Africa.)

COSTUME OF AN ENGLISH ABBESS.

An Abbess is the superiour of a nunnery or other female religious community. An Abbess, in the Roman Catholick Church, possesses in general the same dignity and authority as an abbot, except that she cannot exercise the spiritual functions appertaining to the priesthood. An abbess for example cannot confess her nuns; although it appears that in ancient times she was allowed to do so; and that the practice was suppressed, according to the learned father Dom Martene, in his treatise on the Rites of the Church, in consequence of its having been found that there was no end to the questions which female curiosity would ask. According to a decree of the Council of Trent, an abbess, at the time of her election, ought to be at least forty years old, and to have made profession for eight years; and it is forbidden that any person be elected to the dignity who has not been professed for five years, or is under thirty years of age.

MAMMOTH CAVE IN KENTUCKY.

This cavern ranks emphatically among the most wonderful natural curiosities with which our country abounds; and not improbably, it is the most extensive cavern yet discovered. It is situated in Edmonson county, Ky., about one hundred and twenty-five miles from Lexington, and ninety-nine from Louisville. It is visited frequently by travellers; but it is to be regretted that none have as yet thoroughly explored its recesses. Its entrance is in a ravine or basin covered with a growth of oak, and surrounded by abrupt precipices. The Lexington Intelligencer contains the following description of the cave, by a recent visiter.

A narrow, winding foot path conducted us to the mouth of the cave, near which are the ruins of several furnaces, constructed many years since, and employed in the manufacture of salt petre, and about fifty iron kettles used for the same purpose. Before entering the cave, we had to descend another steep precipice, about thirty feet.—Standing upon this, we felt a cold atmospherick current rushing from the cavern, which with the damp dark entrance below (the water dropping from the rocks) rendered the prospect so inhospitable and comfortless, as almost to chill the curiosity, and forbid a further descent. After descending this precipice, our guide lighted the lamps, the air being too strong at the summit, to descend with them burning, and with a slight inclination of the head and shuddering sensations, we passed under the immense masses of overhanging crags, into a narrow winding avenue, leading to the high arched rooms of the main cavern. This avenue extends a quarter of a mile, and was first rendered passable by visiters in an erect position, by the saltpetre manufacturers, whose *improvements*, if they may be so called, extend a mile into the cave. A wagon road was constructed by them this distance, and the wooden pipes for the conveyance of water from the mouth of the cave to the *hoppers*, and much other machinery made use of by the manufacturers still remain as they were left twenty years ago. As we passed along this road we also observed the *ruts* formed by the wagon wheels, and the tracks made by the oxen employed in the cave, which in many places are as perfect and apparently as *new* as if made yesterday. At the end of the avenue, we passed through a small door, formed by the construction of an artificial wall across the cave, and after gradually ascending and descending some ten or twenty feet over what is called the "rocky mountain," the cavern widens into a lofty and spacious room, the arched ceiling of which, is seventy feet from the floor, and the width a hundred yards.

The roof or arch of the cave here resembles the appearance of a hazy sky dimly lighted by the moon, an alternation of light and shade occasionally deepening into blackness. This room extends perhaps one hundred and fifty yards in length, when the walls contract again, and the cave and its rooms continue comparatively narrow until we entered what is called the Cathedral, which is another stupendous arch, such as nature alone in one of her mightiest convulsions could form. The roof of the cavern here, is upwards of a hundred feet from the floor, and the width including a recess on one side, must be an eighth of a mile. The rocks composing the walls have a brown appearance, but much of the roof here, as in many other parts of the cavern, are of a chalky whiteness. The name of the cathedral was given to this part of the cave from the circumstance of a religious meeting having been held in it a short time since.—A rudely constructed pulpit is still standing, and the seats for the accommodation of the audience, remain as they were originally placed. Our guide stated that a large multitude attended the meeting, and that the room being lighted by a hundred lamps, presented a splendid and sublime appearance. Near this, which is about a mile from the entrance, we were startled by what resembled the report of a cannon. After recovering from our surprise, we ascertained that the almost stunning noise which was reverberated in long and loud echoes from various parts of the cave, was produced by a small stone, thrown by our guide against a log trough formerly used for feeding oxen.

We left the main cave on our right hand, and creeping through a narrow winding avenue a short distance, in which we descended about seventy-five feet, we entered a room of the usual width and height of the main cave, extending a quarter of a mile. At the end of this we again turned to our right, and experienced considerable difficulty in making our way in safety through a narrow aperture, down a descent of one hundred feet more. Here we found ourselves in another large cavern, the roof and walls of which are white and chalky. In travelling half a mile, we came to a part of this cave called "*The Deserted Chamber*." It received this name from the prints of human feet in the sand, on one side of it, which are as perfect as if made yesterday. These impressions extend some distance, and appear to have been made by a female leading a small child. The sand here is moist, which is unusual in the cave, and has undergone the process of petrifaction.

We pursued our route a quarter of a mile further, sometimes being compelled to stoop, when we came to a pit 70 feet in depth by measurement. The diameter of its mouth is about ten or fifteen feet. We held our lamps in a position to obtain a view of its walls some distance downward, which are perpendicular, and appear as regular as if they were the work of art. Near this pit, in the floor of the cave, is a fine cool spring from which all drank freely. We continued our walk a short distance over a smooth sandy floor to what has been named the "*Bottomless Pit;*"—a name applied with much propriety. It extends quite across the cave, in front, leaving a narrow passage into another branch of it on the left, never yet explored, and is about thirty feet in diameter at its mouth. Its walls as far as they could be seen, are much the same as those of the pit described above. Into this abyss a line with weights attached to it, has been lowered three hundred feet, without a certainty then of having reached the bottom. We had prepared ourselves with some small fragments of rock, for the purpose of precipitating into it. In descending, before a contact with the walls, they produced for several seconds a buzzing sound; then the sound and loud echoes made by the first contact were heard;—then the report of a more remote contact;—then a fainter, and still fainter report, until all sound died away upon the ear, apparently from the great distance, rather than from a final stop in the downward progress of the rock.

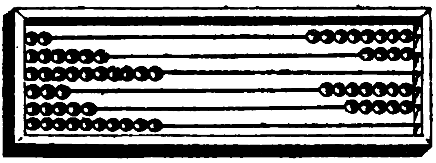
Our forward progress was here interrupted, for although we could see the continuation of the cavern beyond the chasm just described, it would have been madness to have attempted. to reach it.—We therefore retraced our steps nearly a quarter of a mile, and entered without difficulty, another branch of the cave, the floor of which the distance we followed it, (about one mile,) was principally composed of loose masses of flint. Our particular admiration in this cavern, was the "Dome of Washington,"—a magnificent dome having the shape of a bishop's mitre, about fifteen feet at the base, and seventy-five feet in height. We entered this dome by descending ten feet through a small door on the left of the cave. Its form at the base is nearly round, and its walls have all the regularity of construction, and perfection of design, characteristick of the nicest masonry. Leaving this by the same door we entered it, and pursuing our forward course a few hundred yards further, we arrived at the entrance to the "Dome Spring," on our right hand. This dome is larger at the base, and loftier than the one just described, and excited a full measure of wonder and admiration, both for its perfection of form and construction, and a spaciousness of dimensions. Its shape is that of a regular cone, about 20 feet in diameter at the base, and 100 or 120 feet from the floor to the apex. A fine cool spring of the most limpid water we ever beheld, gushes from the wall and covers about one half of the floor. From this fountain in one of the lowest recesses of nature, we again refreshed ourselves; and leaving the dome by the same door that we entered it, (the only one) we travelled nearly half a mile to the "White Chambers."—These apartments derive their name from the beautiful whiteness of their walls and roof, they being frosted over with a bright crystalline substance, about half an inch in thickness—large flakes of which we peeled from the rocks without difficulty. The effect of even the two small lamps we carried with us, upon the walls and roof, was admirable. A large number of lights must have made the spectacle splendid.

Turning into another branch of the cavern on the left hand, a small distance from the "White Chambers," and pursuing it a few hundred yards, ascending in rapid succession steep precipices and crags, we found ourselves once more in the spacious range of rooms we had left previous to our entering the first branch. It should be remarked, that we left the main cavern on the right hand side. We returned to it through an aperture on the *left hand* side; proving, that in our rambles below, we had passed directly under the main cave; our re-entrance to it was about a quarter of a mile beyond, or more distant, from the mouth, than where we had left it. Having arrived at the mouth of the branch at which we at first departed from the main cave, the writer suffered the guide and servant, to go in search of his hat, which for convenience, he had parted from in one of the narrow passages at some distance. The sensations of utter loneliness produced by being left in the high arched, and gloomy room where he stood, were more oppressive than he ever before felt, or expects to feel. The solitude and silence were awful—profound—appalling—words cannot describe—the nerves and senses alone can realize them.

The above is an imperfect description of the writer's own observations while in the interiour of the Mammoth Cave. The distance he travelled in the cave was thought to be about five miles. The portion of the cavern he saw, is probably as interesting as other parts of it, but he scarcely made a beginning toward a complete examination. Indeed, the extent of the cave, with its unnumbered branches, and ramifications, is almost interminable, and months, perhaps years, might be employed in exploring those parts of it that have never yet been seen. The main cave, in which the writer travelled about a mile and a half, extends twelve miles, where it forks, forming two main caves. One of these forks only, has been explored to its termination. The distance from the mouth to this point, is said by some, to be 20 miles. The other fork has been explored an equal distance, but no one yet has had sufficient perseverance to trace it to its end. The branches from the main cave, the whole distance, are frequent, and the branches from the branches are still more frequent, presenting a way resembling the profile of a large tree, with trunk, large branches, smaller branches and twigs. The floor and walls of the cave, are generally dry and dusty. The atmosphere is temperate, pure and invigorating. It is said, that animal substances placed in the cave, never become putrescent. The bodies of several aborigines, retaining in great perfection their general shape and features, in a state of petrifaction, have been discovered in the cave, and are now preserved in some museum of the country. Some of the rooms of the cavern were also used as cemeteries by the original population of the country, the bones and other remains, together with the grave clothes in which the bodies were enveloped and interred, in a state of good preservation, having been discovered by the Saltpetre manufacturers, when making their excavation. The cloth, however, which was formed by the weaving or braiding together of narrow slips of bark, was soon decomposed after exposure to the light. No inconvenience is experienced by remaining in the cavern any length of time, but on the contrary its atmosphere is regarded by those residing in the vicinity, as being highly conducive to health.

A writer in the N. E. Weekly Review informs us that in the room called the Haunted Chamber, is found a chair in the solid rock, which from its having arms has received the appellation of armchair. This room is nearly a rectangular parallelogram, about two miles in length, twenty feet high and ten in width.

He further observed that, for three miles from the mouth, the sides and top of the cavern are covered with a quantity of bats, hanging down from the top in the form of beehives, from two to three feet thick. They are in a torpid state, and are seldom known to fly.—There are about twenty different rooms that have been discovered, and but three of them that have been explored to the end. This vast cavern is apparently hollow beneath, from the sound that is made by walking through many of the rooms. It would probably take months to explore to the end of all the rooms that have been, and which remain yet to be discovered.—The removing of some few obstructions, at a trifling expense, and lighting the cavern, would enable a stage coach to go with safety to the second waterfall, a distance of fifteen miles.



THE ABACUS.

This is an instrument employed to facilitate arithmetical calculations. The name may be given with propriety to any machine for reckoning with counters, beads, &c., in which one line is made to stand for units, another for tens, and so on. We have here given the form of an abacus, such as we may recommend, for the purpose of teaching the first principles of arithmetick, the only use, as far as we know, to which such an instrument is put in this country. Its length should be about three times its breadth. It consists of a frame, traversed by stiff wires, on which beads or counters are strung so as to move easily. The beads on the first right hand row are units, those on the next tens, and so on. Thus, as it stands, the number 57048 is represented upon the right hand part of it.

The abacus can never be much used in this country, owing to our various division of weights and measures. We should need one abacus for dollars and cents; another for avoirdupois weight; a third for troy weight, and so on. In China, however, where the whole system is decimal, that is, where every measure, weight, &c., is the tenth part of the next greater one, this instrument, called in Chinese, Shwanpan, is very much used, and with most astonishing rapidity. It is said that while one man reads over rapidly a number of sums of money, another can add them so as to give the total as soon as the first has done reading. Their abacus differs from the one described above, in having only five beads on each wire, one of which is distinguished from the rest either in colour or size, and stands for five. There is one of these instruments in the East India Company's Museum. The Greeks and Romans used the same sort of abacus, at least in later times. The Russians are also much in the habit of performing calculations by strings of beads. It is probable that the word was originally applied to a board strewed with dust or sand, on which letters were marked in teaching children to read. The word *Abax* was the Greek term for this instrument. Some etymologists derive the name from the Phœnician *Abak*, which signifies dust. Lucas de Burgo, an old algebraical writer, says it is a contraction of Arabicus. It is most probable, however, that the first derivation is correct. A chequered board, such as we still sometimes see at the doors of publick-houses, was formerly used in this country as an abacus, and a chess-board would now do very well for the purposes of instruction abovementioned. The multiplication-table is sometimes called the Pythagorean abacus.

POLLY LEITON AND COUNT SEGUR.

While the French auxiliaries during our Revolution were laying at Hartford, Count Segur obtained permission from his commanding officer, Count de Rochambeau to make an excursion to New-London.—Not satisfied with a view of the remnants of a town which the perfidious Arnold had just burnt and destroyed, he was attracted to Newport, R. I. a town which was then celebrated for its circles of enlightened and modest men and handsome and talented women.—He pleasantly describes his meeting the daughter of an elderly quaker, whose unconscionable gravity seldom allowed him to 'bare his thoughts, and never to bare his head.' Although her father's company was nearly intolerable, notwithstanding his virtues, Polly Leiton we are assured was a charming girl. So much beauty, simplicity, elegance and modesty, were perhaps never before combined in the same person. 'Her gown was white, like herself, whilst her ample muslin neckerchief and the envious cambrick of her cap, which nearly hid her light-coloured hair, and the modest attire in short, of a pious virgin, seemed vainly to endeavour to conceal the most graceful figure and the most beautiful form imaginable. Her eyes seemed to reflect as in a mirrour the meekness and purity of her mind and the goodness of her heart; she received them with an open ingenuity which delighted the Count; and the use of the familiar word *thou*, which the rules of her sect prescribed, gave to their new acquaintance the appearance of an old friendship.'

In their conversations she surprised the Count by the candour and originality of her questions; "Thou hast then" she said, "neither wife not children in Europe, since thou leavest thy country and comest so far to engage in that cruel occupation war?"

"But it is for your welfare," replied the Count, "that I quit all I hold dear, and it is to defend your liberty that I came to fight the English."

"The English," she rejoined, "have done thee no harm, and wherefore shouldst thou care about our liberty? We ought never to interfere in other people's business unless it be to reconcile them together and prevent the effusion of blood."

"But," said the Count, "my King has ordered me to come here and engage his enemies and your own."

"Thy King then, orders thee to do a thing which is unjust, inhuman, and contrary to what thy God ordereth. Thou shouldst obey thy God and disobey thy king, for he is King to preserve and not to destroy.—I am sure that thy wife, if she have a good heart, is of my opinion."

"What," asks the Count enthusiastically, "could I reply to that angel? For, in truth, I was tempted to believe that she was a celestial being. Certain it is, that, if I had not then been married and happy, I should, whilst coming to defend the liberty of the Americans, have lost my own at the feet of Polly Leiton."

PRECOCIOUS WITS.—I asked two little village boys, one seven, the other eight years old, what they meant to be when they were men. Says one, "I shall be the doctor of the village." And you, what shall you be? said I to the other. "Oh! if brother's a doctor, I'll be cure. He shall kill the people, and I'll bury them, so we shall have the whole village between us."—*Bulwer's France.*

THE RUINS OF AMERICA.

There may be no such ruins in America as are found in Europe, or in Asia, or in Africa: but other ruins there are, of a prodigious magnitude—the ruins of a mighty people. There may be no places of pilgrimage in America, unless it be some lonely battle-ground, already forgotten by the neighbourhood, overgrown with a forest, and overshadowed by a perpetual deep darkness, or covered, far and wide, with a sea of weltering herbage—the frightful vegetation of death; no places that have been sanctified by song or story, ages after ages, with beautiful tradition, or heroick poetry, save here and there a small spot of earth shut in by the great hills, or fortified by the everlasting rocks, where the red man withstood the white man, while the noise and the flash of the terrible weapons with which the latter shot fire into the heart of the former, appeared to the savage to be that very noise and brightness which he had seen set fire to the woods about his path, tear up the earth under his feet, and shatter the very sky over his head; or some other shadowy quiet place or smooth hill-top, where the men of the revolution made war upon their fathers and brothers—upon the most powerful nation of the earth, while her ships covered the sea, and her armies were on the march in every quarter of the globe.

There may be no piles of barbarian architecture, each a wilderness of turrets, towers, and battlements, rocking to the sea breeze, or overshadowing the high places of power in America; no half-buried city like the pillared and sculptured treasuries of the art which encumber the earth, and choke up the rivers of the old world, or come and go with the tide—appear and disappear, day after day, along the sea-shore of states that have perished for ever; cities buried by the volcano or the earthquake, overthrown by the savage, swept over by the sea, or swallowed by the sand of the desert, yet crowded with strange beauty, and full of glorious wreck; no prodigies of the mist of that beautiful dim vapour, the twilight of another world, the atmosphere of tradition, through the bannered palaces, the rocky fortresses, and the haughty piles of Europe, loom with a most unearthly grandeur. But if there are no such things in America, there are things which are to be found nowhere else on earth now—the live wreck of a prodigious empire that has departed from before our face within the memory of man; the last of a people who have no history, and who but the other day were in possession of a quarter of the whole earth.

TABLE OF CATARACTS,

IN AMERICA.

Names.	Perpendicular height.	Whole descent.
Tequendama, S. America	600	600
Nipegon, U. Canada	600	600
Montmorency, L. C.	250	250
Falling Spring, Va.	200	200
Niagara	174	281
Shawenegan, L. C.	150	150
Wilberforce, Hood River, U. C.	100	250
Pusambio, S. America		400
Missouri	87	352
Passaic, N. J.	70	70
Cohoes, Mohawk, N. Y.	70	70
Claudiere, L. C.		130
Housatonic, Conn.	60	60
Great Falls, Potomac		76
Little Falls, Potomac		37
St. John, L. C.	45	45
Bellows Falls, Conn. River		44
Grand Mere, L. C.	30	30
St. Anthony, Miss.	16½	74
Packagama, Miss.	20	20
Monongahela, Va.	20	20
St. Mary's U. C.		22½
Grosse Isle, L. C.	15	15
Ottawas, U. C.		20
Windsor Falls, Mass.	70	100
IN EUROPE.		
Marble Cascade, Italy	300	300
Powerscourt, Ireland	300	300
Pistilly, Cayne, Wales	200	200
Ceresoli, Savoy		2400
Evanson, Savoy		1200
Nun of Capena, Savoy		1100
Staub Bach, Switzerland		900
Sour Milk Force, England		900
Glommen, Norway		500
Foyers, Scotland		212
Cettina, Dalmatia	150	150
Teverone, Italy	100	100
Trohletta, Sweden		100
In Devonshire, England		100
Hardrow Force, England		99
Fall of the Rhine, Switzerland	70	70
Thornton Force, England		90
Rocky Linn, Scotland		80
Wethercot, England		75
Dank Cave, England		52

EMPLOYMENT OF TIME.

Extract from Mr. Moore's Address before the General Trades' Union, &c. Sept. 1834.

What can be more humiliating to the Philosopher, or discouraging to the philanthropist, than the reflection that a majority of mankind rather seek to *kill time than improve it!* It is generally those who need instruction *most*, that strive least to obtain it; and hence the more ignorant a man is, the less does he appreciate the value and importance of the winged hours. Who, that is acquainted with the delights of knowledge, with the value of reflection, and the charms of contemplation, but must hear with deep regret those who have never endeavoured to profit by the past, complaining of the tardiness of time and sighing for the future? And why should man seek to pass his time in idleness, or in vain and unprofitable pursuits? Why neglect to cultivate the mental faculties which God has given him? He can plead no excuse in extenuation. Neither nature nor circumstance can furnish him with a sufficient apology for such delinquency. If deprived of the advantages of an early education, the more anxious and industrious should he be to obtain one. And if so fortunate as to have acquired more information than his neighbours, the more liberal he should be in the dispensation of his knowledge. Placed in a world, rife with interest, replete with curious varieties, and pregnant with unexplored phenomena, man is urged by every motive, by every inducement, to acquaint himself as far as possible, with the nature and designs of that creation of which he forms so interesting and important a feature. He is called upon by every consideration, to devote his time and his energies to the ascertainment and development of those truths, whether physical, political or moral, which concern the welfare of man: and he who neglects to perform those duties, contravenes, as far as in him lies, the purposes of his creation.

A blind veneration for antiquity, originating in the credulity and indolency of the human mind, is one great source of errour and ignorance. Men find less trouble and labour in adopting the opinions of others, than in investigating and forming opinions of their own; and hence their willingness to follow in the footsteps of their ancestors. So long as men act upon the principle, that the antiquity of an opinion, or the universality with which it has been received, is an indubitable evidence of its truth, so long will they maintain and propagate errour and falsehood. Would men but reflect, that the indolent and ignorant have ever outnumbered the reasoning and intellectual; and that the more ancient an opinion, the nearer it approaches to the legendary and fabulous times, they would not so readily estimate its worth by the number of votaries, or the antiquity of its existence. Shall I be told, that but comparatively few are capable of becoming habitual thinkers and correct reasoners—that nature has withheld her intellectual gifts from the great majority of her children, and decided that they should be governed and controled by a chosen and favoured few? Let no man so far presume to question the justice and goodness of the Universal Parent. I am aware, however, that there exists a disparity in the minds and capacities of men; and I am also aware, that that disparity arises in a great degree from the volition of the creature. Such is the habitual negligence of men, and so prone are they to trifles, that a majority of them feel a deeper interest in the displays of necromancy, than in the *demonstrations of philosophy*; and would listen with greater attention to the ravings of a fanatick, or the pratings of a parrot, than to the thunders of Sinai, or a voice from heaven. And why this abuse of reason, this poverty of mind and dereliction of thought? Does the cause necessarily exist in man's nature and constitution? By no means—but in his habits and his will. The majority of distinguished individuals, owe their elevation to the *moral qualities*, rather than to native superiority of intellect. The truth of this position is strikingly exemplified in the life and achievements of Carsten Niebuhr. Born a peasant in a remote corner of an obscure province, far removed from all the facilities of acquiring information—poor and an orphan—gifted but moderately by nature—with a memory not remarkably retentive, and his ability of acquiring knowledge the most common—yet, notwithstanding all these unpropitious circumstances, he became by dint of perseverance and indefatigable industry, one of the most distinguished men of his age. His memory will survive and flourish—be honoured and revered, whilst science has a friend, or virtue an admirer.

Of what benefit would the *native genius* of a *Newton* or a *Liebnitz* have been to themselves, or to the world, without the aid of *method* and *mental industry?* Not by intuition, but by the deductions of reason, was the latter enabled to discover the order of fluxions, or the *differential calculus*—and the former, the *laws of universal gravitation*. It was *industry* and *mental discipline*, that enabled the immortal *Tully* to sustain for a season, the fortunes of degenerate and sinking Rome—that enabled Napoleon to control the destinies of Europe—and Franklin to follow nature to her hiding place, and pluck the master-secret from her bosom.

All men, when their jealousies and prejudices are quiescent, admire genius, and willingly do homage to intellectual greatness—nay, regard the master spirits of intelligence, as beings almost superhuman; and hence, the ancients deified their sages and benefactors—and hence, the moderns speak of Plato, as the *divine*—of Galileo and Kepler—of La Grange and La Place—of Milton and Shakspeare—of Jefferson and Franklin, as "*the immortal*."—And is it not extraordinary, that men should idolize qualities in *others*, which they neglect to cultivate in *themselves?* Is it not strange, that the love of mental ease should, so often, nay, so generally, triumph over all the aspirations of a generous ambition—over every impulse, every desire for intellectual eminence?

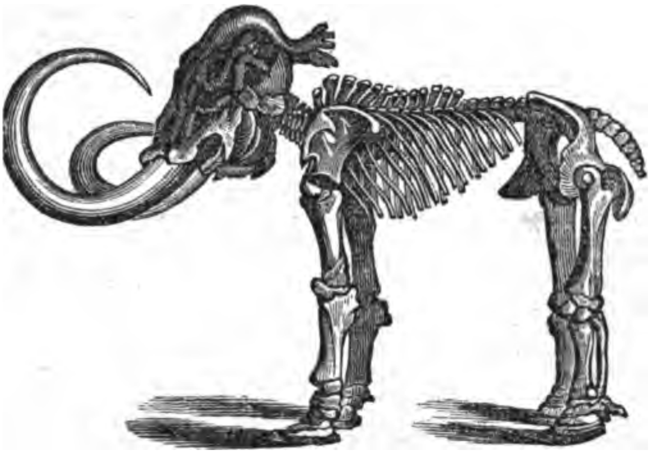
Most men are willing to admit, (and feel a secret pride in the admission,) that when God said "let us make man in our own image," he meant that the resemblance should consist in the intellectual character and qualifications of man. Admitting the correctness of this interpretation, it follows, that in proportion as we advance in knowledge, in that ratio do we approximate to the character and likeness of our Creator. And of consequence, as we remain stationary, or retrograde, do we assimilate to the brutes that perish. There are none but would startle with horrour at the reflection, that they resembled in *form and face*, the ape or the elephant; and yet, strange and paradoxical as it may appear, the majority of mankind, rather than task their mental powers, would prefer to live and die resembling in *mind and habits* the ox and the ass. Be stimulated then, my friends, by the reflection, that every acquisition of knowledge, if properly applied, elevates your character, augments your happiness, and increases and strengthens your resemblance to your Creator. I would not have you understand, however, that the *mere acquisition of knowledge*, or what is generally called an *education*, is sufficient to render you either wise or virtuous. Man is too apt to learn *mechanically;* and his knowledge, when mechanical, is of but little more service or utility to him, than is the faculty of articulating certain words to the parrot or the jackdaw. Without severe mental training, and an assiduous cultivation of the just powers of thought, and the general but strict regulation of the faculties of the mind, the great purposes of education are seldom if ever accomplished. He who has treasured up much information, regardless of system or method, is admirably described in the following couplet, by England's greatest didactick poet,—

> "A bookful blockhead—ignorantly read,
> With loads of learned lumber in his head."

The value of our acquirements depends, not so much upon their extent or variety, as upon the manner and capacity with which they are applied. When men learn *how* to think, they soon begin to think correctly. No precocity of genius—no expansion of native intellect—no acquisitions of knowledge, can render men wise and useful, without they know how to direct their powers and use their wisdom. How strong the propriety then, nay, how imperative the duty, especially in a government like ours, where the publick voice is omnipotent, where the destinies of the republick are committed to the hands of its citizens, where government is a deposit intrusted alike to all, and where all are accountable for the administration of its affairs, that all should be acquainted with its character and genius, and capable of investigating the causes that may secure its stability, or accelerate its destruction.

FIRE-SHIPS.

These are generally old vessels filled with combustibles, and fitted with grappling-irons, to hook enemy's ships, and set them on fire. The following is a description of the fire-ships which were of such essential service to the Greeks, in their recent war with Turkey. 'The vessels usually employed for this service,' says Emerson, 'are old ships, purchased by the government. Their construction as fire-ships is very simple, nothing more being wanted than active combustion. For this purpose, the ribs, hole and sides of the vessel, after being well tarred, are lined with dried furze, dipped in pitch and lees of oil, and sprinkled with sulphur; a number of hatchways are then cut along the deck, and under each is placed a small barrel of gun-powder; so that at the moment of conflagration, each throws off its respective hatch, and giving ample vent to the flames, prevents the deck being too soon destroyed by the explosion. A train which passes through every part of the ship, and communicates with every barrel, running round the deck, and passing out at the steerage window, completes the preparation below; whilst above, every rope and yarn is well covered with tar, so as speedily to convey the flames to the sails; and at the extremity of each yard-arm, is attached a wickered hook, which, being once entangled with the enemy's rigging, renders escape after coming in contact, almost a matter of impossibility. The train, to prevent accidents, is never laid till the moment of using it; when all being placed in order, and the wind favourable, with every sail set so as to increase the flames, she bears down upon the enemy's line, whilst the crew, usually twenty-five or thirty in number, have no other defence than crouching behind the after bulwarks. When close upon the destined ship, all hands descend by the stern into a launch fitted out for the purpose, with high gunwales and a pair of small swivels; and at the moment of contact, the train is fired by the captain, and every hatch being thrown off, the flames burst forth, at the same instant, from stem to stern; and ascending by the tarred ropes and sails, soon communicate with the rigging of the enemy's vessel, who have never yet, in one instance, been able to extricate themselves. In fact, such is the terrour with which they have inspired the Turks, that they seldom make the slightest resistance. On the distant approach of the fire-ship they maintain, for some minutes, an incessant random cannonade; but, at length, long before she comes in contact, precipitate themselves into the sea, and attempt to reach the other vessels, scarcely one remaining to the last moment, to attempt to save the devoted vessel. Sometimes, however, armed boats are sent off from the other vessels of the fleet; but they have never yet been able, either to prevent the approach of the fire-ship, or seize on the crew while making their escape; and though fire-ships are in other countries considered a forlorn hope, such is the stupidity and terrour of the Turks, that it is rarely that one of the brulottiers is wounded, and very seldom indeed that any lose their lives. The service, however, from the risk to which it is exposed, is rewarded with higher pay than what is given to ordinary seamen.



FOSSIL REMAINS OF THE SIBERIAN MAMMOTH.

It has been demonstrated by Cuvier, that this animal was of a different species from the mastodon, or American mammoth. Its bones have been found in the alluvial soil near London, Northampton, Gloucester, Harwich, Norwich, in Salisbury plain, and in other places in England; they also occur in the north of Ireland; and in Sweden, Iceland, Russia, Poland, Germany, France, Holland, and Hungary, the bones and teeth have been met with in abundance. Its teeth have also been found in North and South America, and abundantly in Asiatic Russia. Pallas says, that from the Don to the Tchutskoiness, there is scarcely a river that does not afford the remains of the mammoth, and that they are frequently imbedded in *alluvial soil, containing marine production.* The skeletons are seldom complete; but the following interesting narrative will show that, in one instance, the animal has been found in an entire state.

In the year 1799, a Tungusian fisherman observed a strange shapeless mass projecting from an ice-bank, near the mouth of a river in the north of Siberia, the nature of which he did not understand, and which was so high in the bank as to be beyond his reach. He next year observed the same object, which was then rather more disengaged from among the ice; but was still unable to conceive what it was. Towards the end of the following summer, 1801, he could distinctly see that it was the frozen carcase of an enormous animal, the entire flank of which, and one of its tusks, had become disengaged from the ice. In consequence of the ice beginning to melt earlier, and to a greater degree than usual, in 1803, the fifth year of this discovery, the enormous carcase became entirely disengaged, and fell down from the ice-crag on a sand bank forming part of the coast of the Arctic Ocean. In the month of march of that year, the Tungusian carried away the two tusks, which he sold for fifty rubles, about fifteen pounds sterling.

Two years afterwards this animal still remained on the sand-bank, where it had fallen from the ice; but its body was then greatly mutilated. The peasants had taken away considerable quantities of its flesh to feed their dogs; and the wild animals, particularly the white bears, had also feasted on the carcase; yet the skeleton remained quite entire, except that one of the fore legs was gone. The entire spine, the pelvis, one shoulder blade, and three legs, were still held together by their ligaments, and by some remains of the skin; and the other shoulder blade was found at a short distance. The head remained, covered by the dried skin, and the pupil of the eyes was still distinguishable. The brain also remained within the skull, but a good deal shrunk and dried up; and one of the ears was in excellent preservation, still retaining a tuft of strong bristly hair. The upper lip was a good deal eaten away, and the under lip was entirely gone, so that the teeth were distinctly seen. The animal was a male, and had a long mane on its neck.

The skin was extremely thick and heavy, and as much of it remained as required the exertions of ten men to carry away, which they did with considerable difficulty. More than thirty pounds weight of the hair and bristles of this animal were gathered from the wet sand-bank, having been trampled into the mud by the white bears, while devouring the carcase. The hair was of three distinct kinds; one consisting of stiff black bristles, a foot or more in length; another of thinner bristles, or coarse flexible hair, of a reddish-brown colour; and the third of coarse reddish-brown wool, which grew among the roots of the hair. These afford an undeniable proof that this animal had belonged to a race of elephants inhabiting a cold region, with which we are unacquainted, and by no means fitted to dwell in the torrid zone. It is also evident that this enormous animal must have been frozen up by the ice at the moment of its death.

On page 248 of this Magazine we gave a representation of the Mammoth of the North, in which the tusks were turned downwards. Some have thought the representation in this respect incorrect. Baron Cuvier on examining a specimen of these remains which was taken to England by Mr. R. Peale, concluded from analogy, that this animal commonly called the Mastodon, differed from the Elephant in no other material respect than in the formation of the teeth. Some English writers, upon the strength of this, have represented the Siberian Mammoth, of whose skeleton a figure is hereto prefixed, to be identically the same animal as to formation.

The English Saturday Magazine would likewise make it the same animal as the Mastodon of Ohio. That Magazine asserts this upon a comparison of the figures of the two skeletons as respectively furnished by Mr. Peale and Baron Cuvier. The difference of the two animals, however, even on a comparison of these engravings are more obvious than that Magazine seems to have supposed. Although we are willing to concede to that Magazine, notwithstanding Mr. Peale's opinion to the contrary, that from considerations of comparative anatomy the tusks of this animal undoubtedly turned upwards, yet, we are constrained to aver, and we do it from personal examination of the skeleton of the Mastodon of the States, that if the representation of the Siberian remains are correct, the declaration of its identity with the former is wrong; and we feel prepared to say that the differences between the two specimens are nearly as great as those between a horse and a cow. No one seems better qualified to give a competent description of the remains of the American animal than Mr. Peale, who collected the bones, put them together for publick exhibition and drew a representation of them with his own hand. He describes the American Mastodon as distinct from all other fossil remains ever found, and therefore distinct from those of the Siberian Mammoth. The material difference consists in the formation of the teeth: its distinctive characteristicks from those of the Siberian Mammoth consist not only in the teeth but in its general osteological conformation—the bones are larger and more clumsily shaped—the joints of the legs are different, those of the Mastodon being hinged, while those of the Siberian Mammoth are ball and socket. It differs likewise in the feet, the Siberian Mammoth being as is represented hoofed or solipeda, and the Mastodon digitigrade, or having toes or split hoofs, similar to the elephant. There are likewise differences in the size of the skeleton and length of the ribs; besides numerous other minor differences which sufficiently distinguish the Mastodon of America not only from the Siberian Mammoth but from all other fossil remains yet discovered. The Saturday Magazine charges Mr. Peale with an insufficient knowledge of comparative anatomy. This allegation seems to us to be rather *ad captandum*, and is certainly unjust. Mr. Peale had the remains of the animal before him, and was himself endowed we believe with good eyes and employed a faithful pencil. With the exception therefore of the position of the tusks, which might or might not have been an original errour, we cannot perceive how Mr. Peale could have erred in the delineation of this animal's anatomical construction. We have seen, we repeat, the skeleton of the Mastodon; and we can assert that the Saturday Magazine has betrayed a greater ignorance of the American Mastodon than Mr. Peale probably could have displayed in reference to the fossil remains of any country.

KISSES.

A kiss is said to be the sweetest pledge of tenderness and friendship; and as we have never seen it defined, we will call it, a labial contaction followed by a smack! In our country at least, kisses are not wantonly dispensed; they are the peculiar treasure of the ladies, and are awarded by them in such a sparing manner, that the lucky one who receives them may deem himself an honoured favourite.—It is not here a general method of salutation or of welcome; and unless it be upon New Year's day, it is seldom bestowed save as a pledge of affection. In Russia, however, according to Sir Robert Ker Porter this seal of friendship is daily appropriated to as common and publick use, as the shaking of the hands among us. 'It is not sufficient that the fair sex salute each other, or touch your cheek: but no bearded boor meets his fellow, but forty smacks are heard, as though each were sucking cider through a vent-peg. Every man, young, old, lame, blind, or ever so disgusting, when he kisses the hand of any woman, let her delicacy be ever so nice, or her rank exalted, she must return the salute on his cheek.' This is done at every interview, although little intimacy may exist between the parties: about the conclusion of the six weeks' fast, the custom of kissing is most generally indulged in; then society is but one scene of kissing strife!

Indeed the custom is systematick in that country, and the various kinds of kisses are arranged into four classes. First, the kiss religious. This is the highest in degree, and is of widest privilege, being used only at sacred periods; but during the holy seasons, under its passport, the veriest clown may find his way to the cheek of the loveliest or most illustrious woman in the empire.

Second, the kiss of love! This is declared to be the sweetest, and it is the rarest; but it is said to have many a counterfeit, for its soft touch unites in one moment lips, heart, and soul. It is spoken of as of divine origin, and its delicate nature never allows it to be practised in publick.

Third, the kiss platonick, or the kiss of friendship. This Sir Robert thinks almost as dear as the former, though not quite so sweet!

Lastly, the kiss promiscuous. This species seems to be one of cold formality, and Sir Robert would protest against it as well as all the others, since they deteriorate in value by being so liberal and common. My Lord was undoubtedly the advocate of exclusive privileges! This last kiss, it is said is executed with grace by the well-bred: and it is perfected by acquired elegance and practice, it being the constant ceremony at all interviews between men, women and children.—The lowest classes are as expert at it as the greatest lord. 'Not unfrequently will be seen a couple of large hulking fellows with greasy grisly beards, kissing and smacking, locked in each other's arms, as if they were meeting after an interval of ages.' Sir Robert thinks that had Coriolanus travelled in Rusia instead of among the Volscii he must have knocked down half the empire before he would have been allowed to preserve the *virgin kiss* he carried back to his Virgilia.

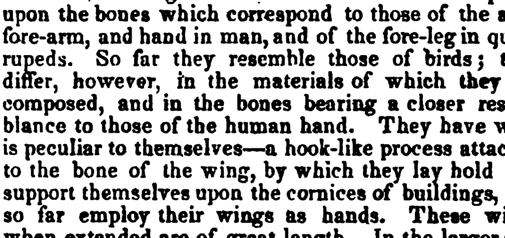
As to the taste of the Russians in this respect, we can only say '*de gustibus non est disputandem*'—our ladies assure us they reserve their kisses for those whom they love best, and seldom impart them to others, unless as a forfeit or upon a wager.

FLYING.

The act of flying is performed in the following manner. The bird first launches itself in the air either by dropping from a height or leaping from the ground: it raises up at the same time the wings, the bones of which correspond very closely to those of the human arm, the place of the hand, however, being occupied by only one finger, he then spreads out the wings to their full extent in a horizontal direction, and presses them down upon the side, and by a succession of these strokes the bird rises into the air with a velocity proportioned to the quickness with which they succeed each other. As the intervals between the strokes are more and more lengthened, the bird either remains on the same level or descends. This vertical movement can only be performed by birds whose wings are horizontal, which is probably the case with the lark and the quail. When birds fly horizontally, their motion is not in a straight line, but obliquely upwards, and they allow the body to come down to a lower level before a second stroke is made by the wings, so that they move in a succession of curves. To ascend obliquely the wings must repeat their strokes upon the air in quick succession, and in descending obliquely these actions are proportionally slower. The tail in its expanded state supports the hind part of the body: when it is depressed while the bird is flying with great velocity, it retards the motion; and by raising the hinder part of the body, it depresses the head. When the tail is turned up it produces a contrary effect, and raises the head. Some birds employ the tail to direct their course, by turning it to one side or the other, in the same manner as a helm is used in steering a ship. We may observe that there is a peculiarity in the bones of birds which serves to lighten their bodies and greatly to facilitate their motions. A considerable portion of the skeleton is formed into receptacles for air, the interiour of most bones in adult birds being destitute of marrow, and containing air-cells which communicate with the windpipe or the mouth. In young birds the interiour of the bone is filled with marrow, which, however, becomes gradually absorbed to make room for the admission of air. This gradual expansion of the air-cells, and absorption of the marrow, can nowhere be observed so well as in young tame geese when killed at different periods.

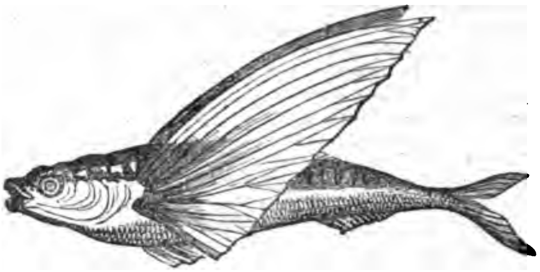
Flying is not confined to those inhabitants of the air which have wings composed of feathers; there are many of these whose bodies are so light as not to require wings made of such strong materials, and which have them composed of thin membranes of the slightest texture. This is the case with all flying insects. The *Bat*, which belongs to the class Mammalia, is supplied with a kind of wing peculiar to itself, which may be considered as an intermediate link between the wings of birds and those of other animals.

The bat's wings are formed of membranes spread upon the bones which correspond to those of the arm, fore-arm, and hand in man, and of the fore-leg in quadrupeds. So far they resemble those of birds; they differ, however, in the materials of which they are composed, and in the bones bearing a closer resemblance to those of the human hand. They have what is peculiar to themselves—a hook-like process attached to the bone of the wing, by which they lay hold and support themselves upon the cornices of buildings, and so far employ their wings as hands. These wings when extended are of great length. In the larger species found in some parts of India, Africa, and South America, celebrated under the name of Vampyres, they often measure five feet; and Sir Hans Sloane was in possession of a specimen brought from Sumatra, the wings of which measured seven feet. As the bat itself is not rendered buoyant by any of the means employed in the internal structure of birds, and as its wings are themselves membranes of some strength, great extent of surface is required in them: they are not, however, fitted for long flight, and must be considered as a very remarkable deviation from the structure of any bird on one part, and from that of the quadruped on the other. The only regularly formed quadruped that has the power of flying is the *Flying Squirrel.*—



The substitute for wings in this animal is a broad fold of the integument spread out on each side of the body, and attached to the fore and hind legs, reaching as far as the feet; so that by stretching out its feet it spreads this fold and keeps it in an extended state, in which it has a nearer resemblance to a parachute than a wing.

The flying squirrel however is not capable of rising from the earth, nor of flying in a horizontal line. Its wings, so called, only enable it to sail off in an inclined plane from one height to a lower one. The animal seems to acquire a projectile force by a muscular spring at the outset, which enables it to descend from the tops of trees to the earth. Some species of lizards and fishes are also furnished with substitutes for wings, by which they are enabled to support themselves in the air, and fly for short distances. In the *Flying Fish* the substitute consists of a simple elongation of the pectoral fins to a sufficient extent to support the animal's weight, in this respect corresponding with the wings of birds, since the pectoral fin of fishes is analogous to the anteriour extremity of the other classes.



The story of the wrongs of this pretty little fish is exceedingly interesting. It would seem that nature had manifested an extraordinary partiality towards it, by increasing its facilities of transition above those of all other fish; but encompassed as it is with enemies, its double powers seem only to procure for it double dangers. When pursued by its numerous enemies in the water, the unfortunate little animal relieves itself from the fatigues of swimming by recourse to its wings; the timid fish rises from the water, and flutters over its surface, for two or three hundred yards, till the muscles employed in moving the wings are enfeebled. He gains in this way additional strength for a new trial at swimming, but its active enemies still in view drive it again from the deep; till, at length, the poor little creature is seen to dart to shorter distances, to flutter with greater effort, and to drop down at last into the mouth of its fierce pursuer. The little fish is likewise exposed to danger from its aerial enemies, for though it should escape from its enemies of the water, yet the tropick bird and albatross are for ever upon the wing to seize it. Thus pursued in air and water, it sometimes seeks refuge from a new enemy; and it is not unfrequent that many of them fall on shipboard, where they furnish man with an object of useless curiosity.

LETTER TO A LAW STUDENT.

The following is an extract from a letter written in Dec. 1833, by the late William Wirt. Although it was written amid the haste and press of court business, yet it is characteristick, and not unworthy its author. The sense is sound, the advice excellent, the style chaste, familiar and attractive. Were the guardians of the rising generation all of them Wirts, we should have a nation of great and mighty men.

Take it for granted that there is no excellence without great labour. No mere aspirations for eminence, however ardent, will do the business. Winking, and sighing, and imagining, and dreaming of greatness, will never make you great. If you would get to the mountain's top on which the temple of fame stands, it will not do to *stand still*, looking, admiring, and wishing you were there. You must gird up your loins, and go to work with all the indomitable energy of Hannibal scaling the Alps. Laborious study, and diligent observation of the world, are both indispensable to the attainment of eminence. By the former, you must make yourself master of all that is known of science and letters; by the latter, you must know *men* at large, and particularly the character and genius of your countrymen. You must cultivate assiduously, the habits of reading, thinking, and observing. Understanding your own language, grammatically, critically, thoroughly learning its origin, or rather various origins, which you may learn from Johnson's and Webster's prefaces to their large dictionaries. Learn all that is delicate and beautiful, as well as strong, in the language, and master all its stores of opulence. You will find a rich mine of instruction in the splendid language of Burke. His diction is frequently magnificent; sometimes too gorgeous, I think, for a chaste and correct taste; but he will show you all the wealth of your language. You must, by ardent study and practice, acquire for yourself a mastery of the language, and be able both to speak and to write it, promptly, easily, elegantly, and with that variety of style, which different subjects, different hearers, and different readers are continually requiring. You must have such a command of it as to be able to adapt yourself, with intuitive quickness and ease, to every situation in which you may chance to be placed—and you will find no great difficulty in this, if you have the *copia verborum* and a correct taste. With this study of the language you must take care to unite the habits already mentioned—the diligent observation of all that is passing around you, and *active, close, and useful thinking*. If you have access to Franklin's works, read them carefully, particularly his third volume, and you will know what I mean by *the habits of observing and thinking*. We cannot all be *Franklins* it is true; but, by imitating his mental habits and unwearied industry, we may reach an eminence we should never otherwise attain. Nor would he have been the Franklin he was, if he had permitted himself to be discouraged by the reflection that we cannot all be *Newtons*. It is our business to make the most of our talents and opportunities, and instead of discouraging ourselves by comparisons and imaginary impossibilities, to believe all things possible, as indeed almost all things are, to a spirit firmly and bravely resolved. Franklin was a fine model of a *practical man* as contradistinguished from a *visionary theorist*, as men of genius are very apt to be. He was great in that greatest of all good qualities, *sound, strong, common sense*. A mere bookworm is a miserable driveller, and a mere genius, a thing of gossamer, fit only for the winds to sport with. Direct your intellectual efforts principally to the cultivation of the strong, masculine qualities of the mind. Learn (I repeat it) *to think—think deeply, comprehensively, powerfully*—and learn the simple nervous language which is appropriate to that kind of thinking. Read the legal and political arguments of Chief Justice Marshall and those of Alexander Hamilton, which are coming out. Read them, *study them;* and observe with what an omnipotent sweep of thought they range over the whole field of every subject they take in hand —and *that* with a scythe so ample, and so keen, not a straw is left standing behind them. Brace yourself up to these great efforts. Strike for this giant character of mind, and leave prettiness and frivolity for triflers. Herculean habits of thinking, to be a laborious student, and to know all that books can teach. This extensive acquisition is necessary, not only to teach you how far science has advanced in every direction, and where the *terra incognito* begins, into which genius is to direct its future discoveries, but to teach you also the strength and weakness of the human intellect; how far it is permitted us to go, and where the penetration of man is forced, by its own impotence and the nature of the subject, to give up the pursuit; and when you have mastered all the past conquests of science, you will understand what Socrates meant by saying that he knew only enough to be sure that he knew nothing—nothing, compared with that illimitable tract that lies beyond the reach of our faculties. You must never be satisfied with the surface of things;—probe them to the bottom, and let nothing go till you understand it as thoroughly as your powers will enable you. Seize the moment of excited curiosity on any subject to solve your doubts;—for if you let it pass, the desire may never return, and you may remain in ignorance. The habits which I have been recommending, are not merely for college, but for life. Franklin's habits of constant and deep excogitation clung to him to his latest hour. Form these habits now; learn all that may be learned at your University, and bring all your acquisitions and your habits to the study of the law, which you say is to be your profession; and when you come to this study, come resolved to master it—not to play in its shallows, but to sound its depths. There is no knowing what a mind greatly and firmly resolved, may achieve in this department of science, as well as every other. Resolve to be the first lawyer of your age, in the depth, extent, variety, and accuracy of your legal learning. Master the science of pleading; master Coke upon Littleton; and Coke's and Plowden's Reports. Master Ferne on Contingent Remainders and Executory Devises, till you can sport and play familiarly with its most subtle distinctions. Lay your foundation deep, and broad, and strong, and you will find the superstructure comparatively light work. It is not by shrinking from the difficult parts of the science, but by courting them, that a man rises to professional greatness. There is a deal of learning that is dry, dark, revolting—but it is an old feudal castle, in perfect preservation, which the legal architect, who aspires to the first honours of his profession, will delight to explore, and learn all the uses to which its various parts used to be put; and he will the better understand, enjoy and relish the progressive improvements of the science in modern times. You must be a master in every branch of the science that belongs to your profession; the laws of nature and of nations, the civil law, the law merchant, the maritime law, &c., the chart and outline of all which you will see in Blackstone's Commentaries. Thus covered with the panoply of professional learning, a master of the pleadings, practice and cases, and at the same time a great constitutional and philosophick lawyer, you must keep way also with the march of general science. Do you think this requiring too much? Look at Brougham, and see what man can do if well armed and well resolved. With a load of professional duties that would of themselves have been appalling to the most of our countrymen, he stood, nevertheless, at the head of his party in the House of Commons, and, at the same time, set in motion and superintended various primary schools and various periodical works, the most instructive and useful that ever issued from the British press, to which he furnished, with his own pen, some of the most masterly contributions, and yet found time not only to keep pace with the progress of the arts and sciences, but to keep at the head of those whose peculiar and exclusive occupations these arts and sciences were. There is a model of industry and usefulness worthy of all our emulation. You must, indeed, be a great lawyer! but it will not do to be a mere lawyer—more especially as you are very properly turning your mind also to the political service of your country, and to the study and practice of eloquence. You must, therefore, be a political lawyer and historian; thoroughly versed in the constitution and laws of our country, and fully acquainted with all its statisticks, and the history of all the leading measures which have distinguished the several administrations. You must study the debates in Congress, and observe what have been the actual effects upon the country of the various measures that have been the most strenuously contested in their origin. You must be a master of the science of political economy, and especially of financiering, of which so few of our young countrymen know any thing.

You ask for instructions adapted to the improvement in eloquence. This is a subject for a treatise, not for a letter. Cicero, however, has summed up the whole art in a few words: it is '*apte—distincte, ornate—dicere*'; to speak to the *purpose*; to speak *clearly* and *distinctly*; to speak *gracefully*; to be able to speak to the purpose you must understand your subject and all that belongs to it; and then your thoughts and method must be clear *in themselves* and clearly and distinctly enunciated, and lastly, your voice, style, delivery and gesture must be graceful and delightfully impressive. In relation to this subject, I would strenuously advise you to two things. *Compose much, and often, and carefully with reference to this same rule of "apte, distincte, ornate,"* and let your *conversation* have reference to the same objects. I do not mean that you should be *elaborate* and *formal* in your ordinary conversation. Let it be *perfectly simple and natural*, but always *in good time*, (to speak as the musician,) and well enunciated.

With regard to the style of eloquence that you shall adopt, that must depend very much on your taste and genius. You are not disposed, I presume to be an humble imitator of any man? If you are, you may bid farewell to the hope of eminence in this walk. None are mere imitators to whom Nature has given original powers. The ape alone is content with mere imitations. If Nature has bestowed such a portion of the spirit of oratory as can advance you to a high rank in this walk, your manner *will be* your own. In what style of eloquence you are best fitted to excel, you, yourself, if destined to excellence, are the judge. I can only tell you that the *florid and Asiatic style*, is not the style of the age. The *strong* and *the rugged and abrupt*, are far more successful. Bold propositions, boldly and briefly expressed—pithy sentences—nervous common sense—strong phrases—the *feliciter audax* both in language and conception—well compacted periods—sudden in English or Latin—a keen sarcasm—a merciless personality—a mortal thrust,—these are the beauties and deformities that now make a speaker the most interesting. A gentleman and a christian will conform to the reigning taste so far only as his principles and habits of *decorum* will permit. The florid and Asiatic was never a good style for a European or an American taste. We require that a man should *speak to the purpose and come to the point*—that he should *instruct and convince*. To do this, his mind must move with great strength and power; reason should be manifestly his master faculty—argument should predominate throughout; but these points secured, wit and fancy may cast their lights around his path, provided the wit be courteous as well as brilliant, and the fancy chaste and modest. But they must be kept well in the back ground, for they are dangerous allies; and man had better be without them than show them in front, or to show them too often.

BIOGRAPHY.

We take pleasure in the introducing this new department to the notice of our readers; and we feel assured that a department so full of interest, usefulness and instruction cannot fail to receive that attention and study which it so meritoriously deserves. Biography is history presented in a twofold view; in describing men it is its office to set forth the circumstances in which their characters were developed; and this can hardly be accomplished without a history of the times in which they lived. All great men may be said to be the offspring of Occasion; or in other words it is only in very trying circumstances or necessitous times, that the characters of men are tested and their powers developed, or that men are shown to be what they really are, great or small, and equal or unequal to the occasion that calls them out. When the page of history, therefore, interests us with the relation of great events, we may naturally expect to find thereabouts the biography of the great men who figured contemporaneously, and whose characters and influence must have been more or less intimately blended with the nature of those events, and more or less instrumental in their production. And when we separate the history of the men from the history of the events which followed in the train of their influence, we procure complete characters, which we may survey either by themselves or in reference to the events of their time. Surveyed in either point of view, the study is of extreme interest and incalculable importance. As furnishing examples to young men whose characters are not yet completely formed, or models for maturer years, the study of Biography is as essential and perhaps more useful than any study, save morality, whose principles enter into the formation of character, or control the conduct of men either in publick or private life. As such we introduce it, with the desire that our readers, especially the younger portion of them, should give it no inconsiderable share of their attention.

In selecting subjects, allowing no political considerations to affect our choice, we shall present those whose characters have had a distinguished influence upon the character of the nation and its institutions, whether civil military or religious, and whose deeds or virtues demanding our gratitude and admiration, deserve with their names, to be commemorated and transmitted to posterity. We shall commence with a sketch of General Moultrie; not because we think he should rank first upon the Catalogue, but because it is most convenient.

WILLIAM MOULTRIE, MAJOR GENERAL U. S. A.

General Moultrie was born in the year 1725. With his early history we are entirely unacquainted. About the year 1761, however, when our frontiers were continually suffering under Indian aggressions and difficulties, he was the captain of a company of provincials of South Carolina who proceeded against the Cherokees.

Soon after the first meeting of the Provincial Congress, when our relations with Great Britain were of that unpromising nature which required us to place ourselves on the defensive, two regiments were ordered to be raised in South Carolina, of five hundred men each, with which Moultrie was in some way connected. On the 17th day of June 1775, the same day on which the battle of Bunker's Hill took place, he was promoted to a Colonelship in one of these regiments. He directly entered upon active duty, and early in the following autumn a small company of his soldiers took possession of Fort Johnson. About this time he constructed a flag, which is said to have been the first American Flag displayed in South Carolina; it was large, of a blue colour, with a crescent in the dexter corner. This was probably suggested to Moultrie by the dress of the State troops which was then blue, with silver crescents in their caps.

Early in December of '75 the English were blockading Charleston harbour; with the intention of expelling the British men-of-war from their too familiar situation, Colonel Moultrie with between two and three hundred soldiers and volunteers, embarked at Charleston in the darkness of the night of the 19th, for Haddrell's Point, where he proceeded to erect a battery. By daylight the works were complete, and the cannons mounted. The British were surprised in the morning to observe the threatening attitude of the intrepid Colonel, and becoming alarmed they immediately weighed anchor and left the cove and Sullivan's Island under the control of the American batteries. In the Spring of the next year a fortification was erected upon Sullivan's Island, of a size sufficient to contain a thousand men; and Colonel Moultrie was ordered to that post. It was at this time that the famous expedition under the united sapience of the English commanders was fitting out at New-York against Charleston. The expedition proceeded in its notable scheme, but they found the brave defender of Charleston equal to their united force. The action which attended this attack is described by Colonel Moultrie himself, in his 'Memoirs of the American Revolution,' which he wrote at the close of the war, as follows.

> 'At this time it was the general opinion, especially among the sailors, that two frigates would be a sufficient force to knock the town about our ears, notwithstanding our number of batteries with heavy cannon; but in a few weeks, experience taught us that frigates could make no impression on our palmetto batteries.
>
> 'May 31, a large fleet of British vessels was seen about twenty miles to the windward of the bar; and on the 1st of June, they displayed about fifty sail before the town, on the outside of the bar. The sight of these vessels alarmed us very much; all was hurry and confusion: the president with his council, busy in sending expresses to every part of the country, to hasten down the militia; men running about the town looking for horses, carriages, and boats, to send their families into the country; and as they were going through the town-gates into the country, they met the militia from the country marching into town: traverses were made in the principal streets; fleches thrown up at every place where troops could land, military works going on every where, the lead taken from the windows of the churches and dwelling-houses, to cast into musket balls, and every preparation to receive an attack, which was expected in a few days. June 4th, General Lee arrived from the northward, and took command of the troops. When he came to Sullivan's Island, he did not like that post at all; he said there was no way to retreat; that the garrison would be sacrificed; nay, he called it a "slaughter pen," and wished to withdraw the garri-

son and give up the post; but President Rutledge insisted that it should not be given up: for my part, I never was uneasy on not having a retreat, because I never imagined the enemy could force me to that necessity. Captain Lamperer, a brave and experienced seaman, who had been master of a man-of-war, visited me at the fort after the British ships came over the bar; while we were walking on the platform, looking at the fleet, he said to me, "Well, Colonel, what do you think of it now?" I replied, that "we should beat them." "Sir," said he; "when those ships come to lay along side of your fort, they will knock it down in half an hour," (and that was the opinion of all the sailors,) then I said, "we will lay behind the ruins, and prevent their men from landing." Our fort at this time was not nearly finished; the mechanicks and negro labourers were taken from all the works about the town, and sent down to the Island to complete our fort; we worked very hard, but could not get it nearly finished before the action. On the morning of the 28th of June, I paid a visit to our advance-guard; while I was there, I saw a number of the enemy's boats in motion at the back of Long Island, as if they intended a descent; at the same time, I saw the men-of-war loose their topsails. I hurried back to the fort as fast as possible; when I got there, the ships were already under sail; I immediately ordered the long roll to beat, and officers and men to their posts. We had scarcely manned our guns when the following ships of war came sailing up, as if in confidence of victory; as soon as they came within reach of our guns, we began to fire; they were soon abreast of our little fort,—let go their anchors with springs upon their cables, and began their attack most furiously about ten o'clock, A. M., and continued a brisk fire till about eight o'clock, P. M.

'The ships were the Bristol, of fifty guns, Commodore Sir Peter Parker: the captain had his arm shot off, forty-four men killed, and thirty wounded. The Experiment, fifty guns: the captain lost his arm, fifty-seven killed and thirty wounded. The Active, twenty-eight guns: one lieutenant killed, and one man wounded. The Sole-Bay, twenty-eight guns: two killed, three or four wounded: the Syren, twenty-eight guns; the Acteon, twenty-eight guns, burnt; one lieutenant killed: the Sphinx, twenty-eight guns; lost her bowsprit: The Friendship, twenty-six guns; an armed vessel taken into service.

'The Thunder-Bomb had the beds of her mortar soon disabled; she threw her shells in a very good direction; most of them fell within the fort; but we had a morass in the middle, that swallowed them up instantly. At one time, the commodore's ship swung round with her stern to the fort, which drew the fire of all the guns that could bear upon her. The words that passed along the platform by officers and men were, "mind the commodore—mind the two fifty-gun ships;" most of our attention was paid to the two fifty-gun ships, especially the commodore, who, I dare say, was not at all obliged to us for our particular attention to him. During the action, thousands of our fellow-citizens were looking on with anxious hopes and fears, some of whom had their fathers, brothers, and husbands in the battle; whose hearts must have been pierced at every broadside. After some time, our flag was shot away; their hopes were then gone, and they gave up all for lost! supposing that we had struck our flag and given up the fort. Sergeant Jasper, perceiving that the flag was shot away, and had fallen without the fort, jumped from one of the embrasures, and brought it up through a heavy fire, fixed it upon a sponge-staff, and planted it upon the ramparts again. Our flag once more waving in the air, revived the drooping spirits of our friends, and they continued looking on till night had closed the scene, and hid us from their view. At length, the British gave up the conflict; the ships slipped their cables, and dropped down with the tide and out of the reach of our guns. When the firing had ceased, our friends for a time were again in an unhappy suspense, not knowing our fate; till they received an account by a despatch boat which I sent up to town to acquaint them that the British ships had retired, and that we were victorious.'

Colonel Moultrie and Lieutenant Colonel Motte, soon after this action, received two standards which were presented to them by the lady of Major Elliott.—At the skirmishes at Savannah whither Colonel Moultrie had been despatched on the retreat of the English from Sullivan's Island, one of these standards was lost; and the other would have been taken but for the brave Sergeant Jasper who lost his life in his endeavours to preserve the standard. When the British took possession of Charleston however, that same standard was taken. On the 16th September 1776, Colonel Moultrie received the commission of Brigadier General in the United States army, the colonial troops having been taken into the continental establishment. In February 1779, with a few hundred militia under him, he met the enemy near Beaufort, S. C. and defeated him, although the numbers of the enemy were much superiour to his own. At this time the southern department of the American Army was under the command of General Lincoln. Upon the departure of that General for Georgia, General Moultrie remained in South Carolina with upwards of twelve hundred men to watch the movements of the British. In May, the English General, Provost, marched towards Charleston with four thousand troops. Retiring as the other advanced, General Moultrie in a few days arrived at Charleston, having demolished the bridges on his route, and otherwise materially obstructed the progress of the enemy. Unfortunately General Moultrie lost more than half his troops by desertion; and when Provost appeared before the town, the governour and council were so greatly alarmed that they requested a parley. The magnanimous offer of the British was protection to such as desired it, and imprisonment for the rest of the inhabitants; this offer was rejected, and the Americans proposed to remain neutral during the war. The gallant army of Moultrie were so greatly opposed to this sort of submission, that it was with great difficulty an officer could be found who was willing to take the message to the British camp.

The reply of Provost, was, that his business was with General Moultrie. 'Upon this,' says General Moultrie, 'the governour and council looked very grave and steadfastly at each other, and on me, not knowing what I would say. After a little pause, I said, Gentlemen, you see how the matter stands; the point is this; am I to deliver you up prisoners of war or not? Some replied "yes." I then answered, I am determined not to deliver you up prisoners of war; we will fight it out: and I immediately ordered the flag to be waved from the gate, which was the signal agreed upon, should the conference be at an end.' The enemy decamped next morning, to the surprise of all; the secret, however, was, that they had ascertained that General Lincoln was in their rear, with four thousand strong. Early in the year 1780, General Moultrie again distinguished himself by his foresight and bravery at the siege of Charleston. He was enabled to delay and resist the approaches of the enemy for several weeks, when at length the obstinacy and perseverence of the enemy obliged the citizens to capitulate. General Moultrie was taken prisoner and detained on parole, until February, 1782, when he was exchanged for General Burgoyne. He afterwards attained the rank of Major General. The British soon after evacuated Charleston, and we do not hear that General Moultrie was engaged in any other military affair of note.

General Moultrie was elected Governour of South Carolina in 1775—and in 1794—5. He died on the 27th of September, 1799, at the age of seventy-four.

As a soldier General Moultrie was deliberate, determined and courageous. He laboured with zeal for his country, and endured hardships and losses with extraordinary fortitude. As a private citizen he was as devoted to the happiness and well-being of society, as he was a noble-hearted, brave and patriotick man.

THE MONTH OF JANUARY.

January was distinguished as the first month of the year by Numa Pompilius, the second king of Rome, when he added it and the month of February to the calendar or year of Romulus, the founder and first king of that city. This month, which consists of thirty-one days (originally only thirty,) derived its appellation from the Latin *Januarius*, in honour of *Janus*, a Pagan deity, held in the highest veneration. The first month of the year was named after him, not only on account of his great reputation for judgment respecting things that were past, and his presumed foresight, or foreknowledge of events to come; but also, because he was supposed to have the gates of heaven committed to his particular charge; from which circumstance, he was always represented with a key in his right hand. Hence, too, every Roman door or gate had the name of *Janua;* therefore, the *first* month being styled Januarius, many authors have considered that name to have denoted this period as a *door*, or opening to a new era, or *renewal of time;* for Janus presided over *time*, as well as over war and peace. The statue of Janus had *two faces*, turned from each other; one *old*, and expressive of experience in, or allusive to, *things past;* the other *young*, and typical of his looking forward to the future, or into *time to come*. On some occasions, he was represented with *four* faces, emblematick of the *four seasons*, over which he was supposed to have control. He was still further distinguished as the deity presiding over the year, by being exhibited as sitting in the centre of *twelve altars;* to denote Numa's division of the year into twelve months. On this occasion *figures* were engraven on his hands, to mark the extent, or number of days, to which the year was augmented by that sovereign.

Numa, who was a wise and peaceful prince, by taking away the honour of leading the year from *March*, which was dedicated to Mars, the pagan god of war, and by giving that preference to *January*, perhaps sought to induce his people to value the benefits of Peace, rather than those to be expected from a state of warfare;—but he was also actuated by the desire to begin the year at that period when the Sun should reach its greatest *declension*, or fall; and so keep pace with the progress of that luminary, until it had fulfilled its course, or until the same period next year. The temple dedicated to *Janus*, was ordered, however, to be kept *shut*, in time of peace, and *open* during war: and so powerfully did the amiable example and precepts of Numa operate upon his subjects, that he had the satisfaction, during his reign, of seeing this temple *closed;*—although the Romans were usually so addicted to war, that in the space of 800 years, it was closed only *six* times. The *first* and longest period was during the lifetime of Numa himself; the *second* at the end of the First Punic War;—*thrice* during the reign of Augustus;—and the *sixth time* during the reign of the Emperor Nero.—It may be remarked in this place, that when Julius Cæsar made his alteration in the Roman Calendar, he made *Juno* supersede *Janus*, as the guardian deity of the month of January.

Verstegan observes, that our Saxon ancestors originally styled this month, "Wolf-Monat;" because persons were in greater danger of being devoured by *Wolves* in that season of the year than in any other;—for, the ground being covered with snow, and wild animals, generally, keeping within their dens and holes, as much as possible, these creatures, having no flesh to feed upon, became so ravenous as to attack human beings. When Christianity began to prevail in Britain, "Aefter-Yula," that is *After Christmas*, became the name of the month of January.

In old paintings, the month of January is represented by the figure of a man *clad in white;* which is typical of the snow that usually lies on the ground at this season:—he is blowing on his fingers to indicate the cold; and under his left arm he holds a billet of wood;—or a brazier lies at his feet, filled with flaming wood and glowing charcoal. Near him stands the figure which usually represents the *Sign of Aquarius*, (or that twelfth part of the *Zodiack*, or sun's apparent annual course,) into which the Sun enters on the 19th of this month. The Anglo-Saxons, who were greatly addicted to drinking, depicted January as a man seated at a table and drinking *ale* from a goblet: in the back ground were seen persons ploughing with oxen, sowing seed, and otherwise employed in agricultural labours peculiar to the winter season of the year.

POETRY.

We may be mistaken, but according to our opinion never were lines written or published that possessed so much beauty, grace and truth as the following from the pen of our favourite poetess Mrs. Sigourney. She is the minstrel of America; and Mrs. Hemans the Sigourney of England, with whom she has been compared, though she may have written more, never wrote better and we question whether she can write as well. Some learned people tell us there is no poetry in modern times, and that his taste must be vitiated, his discernment blunted, and that he has neither judgment of human nature nor of language who can relish what they are pleased to call the jingle of the last half century. Learning, however, is useless lumber when it can find no other employment than that of attempting to prove to us against the evidence of our own senses that we are *not* pleased with a thing, when we inevitably *are*. Every individual for himself makes his own taste the ultimate standard of appeal; if this appeal results in teaching some to prefer Homer to Tasso, Anacreon to Milton, Byron to Cowper, or the multitude of Ancient Poets to our own Sigourney, Bryant, Sprague and others, why, we cannot dispute its propriety. We can however urge one to divest himself of prejudice and *a priori* determinations: this being done, let him apply a candid thought to the subject, and if we do not immeasurably err, he will find as much of the pure Hippocrene in the United States as ever imparted inspiration in any territory of the earth. And we may add, he will find the poetick powers of Mrs. Sigourney, not inferiour to those of any poet or poetess of the world. With a splendour of thought, a beauty of diction and smoothness of versification, alike unsurpassed, she infuses the spirit of a heavenly temper into her productions, that while its aim is to soften the asperities of the pathway of human life, to allay vice and fortify virtue, it will not fail to have that wholesome influence in fact upon the moral world, that will procure the admiration of innocence and the applause of Religion.

A collection of Mrs. Sigourney's Poems has recently been published; the collection however we are inclined to believe does not comprise all her poems—they are very numerous. Mrs. Sigourney lives at Hartford, Connecticut, and we are assured that all her poems have been written in those desultory moments when she has found a temporary leisure amidst her many maternal cares. This circumstance would seem to increase her poetick merit already so exalted, and to excuse the fault of any lines or pieces that may bear marks of haste.

WINTER.

I deem thee not unlovely—tho' thou com'st
With a stern visage. To the tuneless bird—
The tender flow'ret—the rejoicing stream,
Thy discipline is harsh. But unto man,
Methinks thou hast a kindlier ministry—
Thy lengthened eve is full of fire-side joys,
And deathless linking of warm heart to heart;
So that the hoarse stream passes by unheard.
Earth rob'd in white, a peaceful sabbath holds,
And keepeth silence at her Maker's feet;
She ceaseth from the harrowing of the plough,
And from the harvest shouting.
Man should rest
Thus from his fevered passions—and exhale
The unbreathed carbon of his festering thought,
And drink in holy health. As the tossed bark
Doth seek the shelter of some quiet bay,
To trim its shattered cordage, and repair
Its riven sails—so should the toil-worn mind
Refit for time's rough voyage. Man, perchance,
Soured by the world's sharp commerce, or impaired
By the wild wanderings of his summer way,
Turns like a truant scholar toward his home,
And yields his nature to sweet influences
That purify and save.
The ruddy boy
Comes with his shouting school-mates from their sport
On the smooth frozen lake, as the first star
Hangs pure, and cold, its silver crescent forth:
And, throwing off his skates, with boisterous glee,
Hastes to his mother's side. Her tender hand
Doth shake the snow-flakes from his glossy curls,
And draws him nearer, and, with gentle voice,
Asks of his lessons—while her lifted heart
Solicits silently the Sire of Heaven
To bless the lad.
The timid infant learns
Better to love its father—longer sits
Upon his knee, and with a velvet lip
Prints on his brow such language, as the tongue
Hath never spoken.
Come thou to life's feast,
With dove-eyed meekness and bland charity—
And thou shalt find even winter's rugged blast,
The minstrel-teacher of the well-tuned soul;
And when the last drop of its cup is drained,
Arising with a song of praise, go up
To the eternal banquet.

EXTINCTION OF THE NATIONAL DEBT.

It is gratifying to Americans, as it affords a practical illustration of the immense resources of the country, that in the course of nineteen years we have paid off a debt of $127,000,000, by the regular operation of our financial and revenue system without the imposition of *direct* taxes (except for a short period) or any other burden which has been seriously felt as such by any portion of the people. Our government is now among nations we believe the only one free from a National Debt. The progress and decline of the National Debt since 1791, may be seen by the following statement of its amount at the beginning of each year from that time to the present.

	Year.		Amount.
First of Jan.	1791	It was	$75,463,476,52
"	1792		77,227,924,66
"	1793		80,352,634,04
"	1794		78,427,404,77
"	1795		80,747,587,39
"	1796		83,762,172,07
"	1797		82,064,479,33
"	1798		79,228,529,12
"	1799		78,408,669,77
"	1800		82,976,294,35
"	1801		83,038,050,80
"	1802		80,712,632,25
"	1803		77,054,686,30
"	1804		86,427,120,88
"	1805		82,312,150,50
"	1806		72,723,270,66
"	1807		69,218,398,64
"	1808		65,196,317,97
"	1809		57 023,192,09
"	1810		53,173,217 52
"	1811		48,005,587,76
"	1812		45,209,737,90
"	1813		55,962,827,57
"	1814		81,487,846,24
"	1815		99,833,660,15
"	1816		127,234,933,74
"	1817		123,491,965,16
"	1818		103,466,633,83
"	1819		95,529,648,28
"	1820		91,025,500,15
"	1821		89,987,427,66
"	1822		93,546,676,98
"	1823		90,875,877,22
"	1824		90,269,777,77
"	1825		83,788,432,71
"	1826		81,054,059,99
"	1827		73 987,357,20
"	1828		67,475,043,87
"	1829		58,421,413,67
"	1830		48,580,534,22
"	1831		39,082,461,88
"	1832		24,282,879,24
"	1833		7,001,698,83
"	1834		4,722,260,29
"	1835		0,000,000,00

Only *nine years* ago, our National Debt was $81,000,000. In 1816 the interest alone amounted to $7,157,500,42. In 1826, to almost $4,000,000. Since the beginning of that year, we have paid off, including interest, very nearly A HUNDRED MILLIONS OF DOLLARS, over and above our current expenses, almost without feeling it.

PRISON DISCIPLINE.

We received a short time since, the Ninth Annual Report of the Boston Prison Discipline Society. This Report is a valuable document, containing much authentick matter and interesting and important information in relation to nearly all the Prisons in the U. S. It exposes the defects of prison discipline and the entire apathy manifested by those connected with prisons as to the moral and religious instruction of the prisoners; it sets forth the horrible consequences which result from the promiscuous assemblage in one filthy contaminating cell, of the blackest criminals with the poor but honest debtors, the immature novitiate in crime with the experienced and hardened villain; and many other glaring deformities in prisons which call aloud for amendment and Reform. It estimates the number of criminals committed to prison in the U. S. in 1833, at 56,800; debtors 39,249; females 18,300. Total committed to prison in 1833, supposed to be 113,380. The number in prison at any one time, is estimated at 12,640. Among 753 persons committed to prison in Massachusetts 431 were drunkards.

We hope to be able to give the subject of Prison discipline a prolonged consideration hereafter in a series of articles.

The Young Man's Pocket Companion,—D. Cooledge, 322 Pearl Street, price 25 cts. This little volume is neatly bound, and contains a copy of the famous Bill of Rights, the Declaration of Independence, Articles of Confederation, the Constitution of the United States, Washington's farewell Address; and much other valuable documentary information. Its cheapness, and its convenience as a book of reference, should place it in the hands of every young man.

SECTION XXIX.

HISTORY.

CHINA.

The history of China has hitherto been involved in darkness, and we have been unable to procure any authentick records or information from any quarter that might be relied on with confidence to elucidate the history of this immense nation. Within the year past, however, Rev. Charles Gutzlaff, who is now, and has been for many years past, an English missionary resident in China, has furnished 'a more correct and extended view of the internal history of China, and of her foreign intercourse, than has ever yet been given to the publick.' We are chiefly indebted to his book for the information we are now about to furnish in reference to this country.

China is a name very probably derived from the dynasty Tsin. It is called by the natives Chung-kwo, the middle kingdom, and Tang-shan, the hills of Tang, (the name of one of the most celebrated dynasties;) the present reigning family has given it the name of Ta-tsing-kwo, the Empire of great Purity. In government proclamations, especially in those addressed to Barbarians, it is often called Teen-chaou, the "Celestial Empire," the natives call themselves Chung-kwo-teih-jin, men of the middle kingdom, or Nanjin, or Tang-jin, men of Hanor of Tang (from the dynasties of those names.) The whole empire is often designated by the appellation Teen hea—under heaven.

China Proper is situated between the 18th and 41st degree of N. Latitude, and between the 98th and 123d degrees longitude E. from Greenwich, and contains about 1,298,000 square miles. The whole extent of the Chinese territory is estimated to be 3,010,400 square statute miles—larger than the whole of Europe. China's northern boundary is the Great Wall, which separates it from Mongolia and Mantchooria. On the East it borders on the Puh-hae, or Gulf of Pe-che-lee, and the Eastern Ocean: on the south it is bounded by the China Sea, Tunkin, the country of the Laos and Birmah; on the west by Tibet, little Bukharia, and Turkestan. It is difficult of access, excepting on the northern and eastern sides. The Great Wall on the Tatar frontier is wholly inadequate to the defence of the country against modern tacticks; on the east it can be assailed by any petty maritime power; it has every where excellent harbours, and ships may go a considerable distance up some rivers without any fear of mutiny or force to repel them.

We shall proceed to a consideration of their ancient history. All writers on the affairs of China agree that the Chinese are a very ancient nation. But that their empire existed before the flood, and even before the era which we assign for the creation of the world, is as extravagant and unfounded as the mythological stories of the Hindoos and Greeks. We believe that the Chinese had as early a notion of astronomy, as the Chaldeans and Egyptians; we give also much credit to their calculations of eclipses, but we greatly doubt whether their chronology is as accurate as we might be led to believe by the advocates of the antediluvian existence of their empire. Not only is the fabulous part of the Chinese history very uncertain, but even the first two dynasties, Hea and Thang, labour under great difficulties, which never have been entirely removed. We must in fact, date the authentick history of China from Confucius, 550 B. C. and consider the duration of the preceding period, as uncertain. Confucius, likewise, is not without errour; for as there were no regular annals, or any celebrated historiographer who flourished before his era, he was not able, notwithstanding the most laborious researches, to avoid it. The destruction of the greater part of Chinese books by Che-hwang-te, the first universal monarch of China, doubtless contributed likewise to render the chronology more erroneous.

Chinese historians divide the whole period of their history according to the dynasties which successively sat upon the throne—these dynasties were 22. Mr. Gutzlaff follows in his view a more convenient order.

I. Mythological Era. From Pwan-koo to the death of Te-shun. Duration uncertain.

II. Ancient History.—From the commencement of the Hea dynasty to the conclusion of the Han dynasty. B. C. 2207 to A. D. 263.

III. Middle Ages of History.—From the Tsin dynasty to the Yuen dynasty. A. D. 264 to 1367.

IV. Modern History.—From the Ming dynasty to the present time. A. D. 1368 to 1833. We shall commence with the

MYTHOLOGICAL ERA.

SAN-HWANG.—THE THREE EMPERORS.

The annals of no nation give us an account of the creation of heaven and earth. God, the author of all things, visible and invisible. holds no place in their vain imaginations, and therefore they do not ascribe to him the creation of all things. Sacred History alone contains a simple and satisfactory account of these subjects.

According to the most learned Chinese the creation of the world is to be ascribed to the mutual operation of the male and female principles; heaven and earth began to exist by their generative power, and by the reciprocal generative power of both, all things were produced. Laou-Keun says, "reason produced one, one produced two, two produced three, three produced all things." We pass by the opinions of others, equally absurd.

When heaven and earth had been seperated, Pwan-koo was born in the midst of them, and was thus enabled to know the height and depth both of earth and heaven. Pwan-koo also comprehended the way in which heaven and earth were created, and therefore it was said of him that he had divided heaven and earth. The Tae-keih (a Chinese nonentity) influenced the Yang and Yin principles; it was by Tae-keih that two forms were produced, and these two forms begat four semblances. by the interchange of which the forms of all kinds of things sprang into existence.

The three following personages are the celestial, terrestrial, and human emperors; whether these peculiar names are expressive of certain periods, or are given as the real names of persons, we cannot determine. Some authors consider them as emblematical of the creation—first of heaven, then of earth, and afterwards of man. These three lived for a long time and begat a prodigious multitude of sons and daughters. Yew-tsaou-she taught the numerous progeny of his ancestors to build nests; for they were then unacquainted with the use of fire, drank the blood of animals, and dressed themselves in their skins: Suy-jin-she discovered the principles of fire by rubbing pieces of wood together till the flame issued forth. Food was now properly dressed, and the people greatly delighted at this new improvement. As there did not yet exist any mode of writing, Suy-jin bound cords together, which served him for a memorandum. He also erected an arena for communicating instruction, and promoted mutual intercourse; thus people became more civilized.

WOO-TEE—FIVE EMPERORS.

Fuh-he, considered as the founder of the Chinese empire, is the first of the Five Emperors. The nation was, during the preceding reign, so much increased as to require a governour. He fixed his capital at Hwaseu, in Shense. It was his greatest endeavour to improve the condition of the people, therefore he taught them to rear cattle. At first, man differed very little from the beasts: 'Though he might know his mother, he could not point out his father; his desires were unrestrained. In his sleep he snored, when he rose he yawned; when hungry, he ate as much as he could digest and threw the remainder away. His dress consisted of the skins of animals; his drink, their blood; but Fuh-he taught them to make nests, and to rear domesticated animals. Observing the constant course of nature, he was anxious to trace the original causes of her great revolutions; he therefore invented a system, which, by combining the characters of the elements in an artificial way, expressed the changes in nature. He drew eight different lines, which he called the eight kwa; these, multiplied by eight, produced a variety of lines, which, substituted for the originating causes of the changes in nature, clearly pointed out the combination of all things.'

This, though nothing better than mere nonsense, without even a shadow of truth, has nevertheless exercised the ingenuity of the wisest Chinese. More useful were Fuh-he's endeavours to express thoughts by hieroglyphick signs. These are said to have originated in the drawing up of two linear tables, the Ho-too and the Lo-shoo which he copied from the back of a dragon rising from the deep. He founded the celebrated city Chin-too, in Honan. By determining the seasons, he introduced order into the performance of business; and to arouse the softer feelings of human nature, Fuh-he was anxious to teach his subjects musick. He instituted marriage, which hitherto had been unknown, appointed negotiators of courtship, and regulated the government. After a life of about two centuries, he died, generally regretted. In this description of a good ruler, which is more than a hundred times repeated by Chinese authors, we ought to distinguish fiction from reality. These were the first weak efforts made to reclaim man from a savage state. It is also very evident that the western part of China was first inhabited; however, the Chinese are too proud to admit that their ancestors emigrated from the West, probably from Hindostan.

Shin-nung, the divine husbandman, taught his people to cultivate the ground; he invented the art of healing. To afford a ready sale for the produce of the country, Shin-nung established a fair, and then died, after a reign of 140 years. But man is not satisfied with the enjoyment of peace. The latter days of Shannung were imbittered by war, which was excited by a prince of the imperial family, who was however defeated by Heen-yuen, by whom the peace of the empire was again established. This prince then ascended the throne, under the name of Hwang-te, or "The Yellow Emperor." He at first had to maintain his power by force of arms; but as soon as he had conquered his adversary, he turned his attention towards the improvement of his country. The population having considerably increased, Hwang-te sent colonies to the southern part of the present province of Pih-chih-le. This prince built a palace of brick: and, with the aid of a man of great talents, increased the number of hieroglyphicks, which he originally copied from the lines upon the back of a certain insect. He went still farther; and to fix his subjects upon the soil, built villages and cities, and introduced the utmost order amongst them. He moreover, erected an observatory, and rectified the calendar; his empress, no less enterprising and inventive, succeeded in manufacturing silk, of which she made elegant robes of state. He invented arms, carts, boats, clocks, chariots, and an ingenious musical instrument; introduced coined money, and regulated the measures. According to this account, there remained very little room for improvement. It is, however, matter of wonder that the antediluvians should have made so rapid a progress in the arts and sciences; but we may, perhaps, account for this, by supposing that the Chinese historians are always anxious to refer entirely to antiquity what has been the work of many ages.

Shaou-haou, his son and successor, was born under the influence of a star; the prevailing element of his nature was metal. The Chinese acknowledge five different elements, from which all things are composed. His reign was inglorious. However, he wished to signalize himself, in the road to improvement, and observing a phenix, ordered all mandarins to wear embroidered birds on their robes of state; which custom is kept up to this day. He invented an air, with the express purpose of rousing the softer feelings of our nature, and protecting harmony. By his negligence, several weak-minded people were enabled to spread the superstitions of magical arts. His grave, as well as that of Hwang-te, is shown to this day.

Chuen-heuh, whose prevailing nature was water, resisted the growing superstition, and introduced a ritual for the service of Shang-te, the supreme emperor (or heavenly ruler.) Notwithstanding the great pains his predecessors had taken to rectify the calendar, he still discovered some errours. From him descended, in the third generation, the celebrated emperor Yu. This prince, anxious to profit by every thing, is celebrated for his ability to distinguish even distant objects, and is said to have possessed penetration to understand the most abstruse things. He followed heaven's course, and understood the unsettled minds of the people; though benevolent he was revered; though indulgent he was beloved. His great attention was directed towards the exercise of virtue, and the whole empire willingly submitted to his rule. During his reign took place a conjunction of five planets, in the constellation of Ying-shih. If we may believe the Chinese historians, the empire was at that time as extensive as at the present moment, stretching southward to Cochin-china, and on the north of Tatary, whilst its eastern boundaries were the ocean.

Te-kuh established schools, and appointed able professors for the instruction of youth. Not satisfied with discouraging vice by exhortation and example, he even promoted virtue by means of that useful instrument—a drum! He introduced polygamy by marrying four wives, three of whom were for a long time barren, but they appealed to Shang-te, and each of them became the mother of a son. Two of these princes are celebrated as the founders of the Shang and Chow dynasties.

Te-che, his eldest son, very unlike his father, lived only to satisfy his own desires, neglecting the government of the state, until at length the nobility, after many fruitless attempts to reform him, called his brother Yaou to the throne, which Te-che lost by his own faults.

THE REIGNS OF YAOU AND SHUN.

We are now arrived at a period which Confucius himself has delineated. It is the most prominent in all Chinese history, the whole government of the country being founded upon the institutions of these two emperors. Their example is elevated above that of all other princes, as if in them alone was original wisdom and virtue in perfection. The best monarchs are only humble imitators of their virtuous actions; no one has surpassed, no one was ever equal to them. Their government having reached the summit of perfection, their successors are not expected to improve the art of government; their utmost efforts scarcely sufficing to enable them to follow the glorious example of antiquity. Yaou the sage, and the divine Shun, have uttered so many excellent sayings, that people ought no more to think for themselves, but simply to adopt the wise maxims of those worthies. Confucius himself merely pretends to be a reformer of his nation, to have nothing original, and only to place the doctrines of these sages in a fuller light. Such, in short, is the veneration of the Chinese, that the greatest eulogium they can pass upon a ruler is to say,—“ You are a Yaou—or a Shun.” These patriarchs have survived many thousand years in the memory of minions; their stern virtues, their filial piety, are the admiration of all ages. We shall faithfully recapitulate their virtues, and simply state our conviction, that Confucius, wishing to draw a man of consummate virtue, invested with ideal perfection the rulers Yaou and Shun, two chiefs famous in the ancient traditional history of the country. Later historians have invalidated Confucius's testimony in favour of their reigns, by ascribing to Hwang-te all the great inventions and improvements which demonstrate, according to Confucius, the great original genius of Yaou and Shun.

Yaou began to reign in 2,337 B. C. He was then very young, but his heart was penetrated by a benevolence as extensive as heaven; in prudence he equalled the most shrewd minds; the lustre of his intelligence shone like the sun in his glory; like the rain which descends from the clouds and fertilizes the country, his blessings were spread over the whole nation. All was simplicity, all was sincerity.

His mother observed a red dragon, and was delivered of him after fourteen months pregnancy. Few great men have found so renowned a biographer as Yaou. His actions, like those of the most celebrated princes, are recorded in the Shoo-king, a work compiled by Confucius, as we have already observed. With Yaou, the first Chinese cycle begins; from him the earliest Chinese annals are dated. The Shoo-king is too sententious, too abrupt, too obscure to be quoted as an incontrovertible authority. The reader has first to consult the commentary, and then to read the text, in order to understand its contents. Yet it forms the great text-book, upon which all Chinese literati have expatiated; their philosophers have no new thoughts, they only comment upon the sententious maxims of the Shoo-king; even in Confucius's own sayings, there is scarcely any sentiment which is not hinted at in the Shoo-king. In this ancient book we find frequent allusion to the Supreme Being; he is referred to in the most solemn terms; to him is ascribed every good and perfect gift. This circumstance would inspire us with delight, and we should call to mind that period of primeval simplicity, when China was free from gross idolatry, did Confucius not inculcate, in plain terms, the worship of material heaven and earth, and make his heroes issue orders to do homage to the spirits of hills, rivers, seas, &c. This latter doctrine is far the more explicit, whilst the former is never dwelt upon.

Yaou was frugal in his food, and almost mean in his dress; to study the happiness of his people was his sole business. Unwearied in his researches, he made annual tours throughout the empire; his arrival was anxiously looked for; his presence as refreshing as that of the rain upon the parched soil. What he taught in words he inculcated by example. “ Strive,” he said, “ for wisdom, and render virtue conspicuous; show obedience to your superiours, be kind, be condescending; thus you will promote harmony, and all the nation will be happy.” Without effort he promoted virtue, his sole example being sufficient to render the whole nation virtuous; “ virtue ran with the speed of a postilion; and he thus ruled the nation as easily as he could turn a finger in the palm of his hand.”—A rare instance, and if true, the only one to be met with in all history!

He commenced his reign with appointing two astronomers, *He*, and *Ho*, to regulate the year, by adding intercalary months, and to point out the four seasons. The southern barbarians came to court, and presented a divine tortoise, having upon its back characters which recorded the history of the world from the beginning. This reign was remarkable for extraordinary and conspicuous omens; there grew a plant, the leaves of which budded and faded according to the period of the moon. The phenix and the ke-lin, a fabulous quadruped, which invariably appears whenever there is a wise emperor at the head of government, rendered his reign exceedingly prosperous. Old and young sang odes in honour of their beloved sovereign. A man of Hwa-fung blessed him, by saying,—“ Shuy-yun, sage, possess riches, enjoy old age, and have many sons.” The emperor replied, “ I do not desire this, for wherever there are many sons, there is also much to fear; where there is much riches, there is also much to do; and as for old age, it is a state of much disgrace.” The old man replied—“ Heaven has brought forth myriads of people, and must give them a government; if you have many sons you may intrust them with the government; if you have much riches, you may disperse them amongst the people; if the empire has a good government, you may harmonize with the spirit of the age; if the empire is ruled negligently, you may yourself cultivate virtue,—when you are a thousand years old, and tired with the world, ascend then on high and become a demi-god; ride upon the white clouds, retire to the imperial abode;—but do not rejoice at the disgrace of old age.”

Yaou was anxious to choose a person who might sustain with him the burden of empire. His choice fell upon Shun, a man belonging to the common people, who was renowned for his persevering filial piety, and rewarded by the emperor with the gift of his own two daughters in marriage.

There is an extraordinary catastrophe mentioned in the reign of Yaou, which is one of the greatest events in the history of mankind,—the deluge. It is said the waters of the deluge rose higher and higher, till their wide expanse encircled the mountains and covered the summits. Mangtsze (Mencius,) in speaking of the same event, remarks, that at the time of Yaou, the deluge had not yet entirely subsided; the jungle and brushwood grew most luxuriantly, and the wild beasts were very numerous, so that the fine grain could not be cultivated. Yaou at first dispatched Kawn to remedy the evil; and as he proved unsuccessful, he was replaced by his son Yu, who succeeded.

We do not doubt but this was the same flood recorded in sacred history, though we are not able to give the exact date from Chinese history; nor do we hesitate to affirm that China was peopled after the deluge, and that the reign of the three emperors is either allegorical or fabulous. The five emperors we consider as renowned chiefs; Yaou, Shun, and Yu, the founders of the Shang dynasty, as the Chinese patriarchs. As these remote ages are enveloped in darkness, we attempt not to lift the veil by mere supposition, though we do not hesitate to affirm, that the Chinese nation, with all the Tatar tribes, descended from Shem, the blessed of God. The same almighty power, which guided those immense hordes of Tatars in swarming to the west, could also conduct a few families to the extremities of eastern Asia. The Chinese spread from the western to the eastern part of the empire, and though no tradition is extant, we believe that they are all of one and the same blood.

During the latter days of Yaou's reign, Shun performed the most arduous duties of the empire for twenty-eight years. Yaou reigned altogether ninety-nine years, a period never exceeded by any monarch; and finally sunk into the grave, 2238 B. C.

Shun was descended from one of the preceding emperors, but his family being poor, he exercised alternately the trade of a husbandman, potter, and fisherman. He had a step-mother and a half-brother, both of whom combined with his father to disquiet him to the utmost. When he was already a colleague of the emperor, married to two beautiful females, and possessed numerous servants and riches, he pined away from being unable to conciliate the good will of his parents. His unwearied love was repaid, however, by the most inveterate hatred. Once he was ordered by Koo-sow, his father, to ascend a barn; and as soon as he had reached the roof the father took away the ladder, and set fire to the barn, in order to burn his son; Shun, however, escaped unhurt. At another time he was compelled to descend into a well, which was immediately covered by his brother Seang; but Shun escaped by a secret passage, while Seang, ignorant of the fact, rejoiced at his having accomplished his unnatural design. He divided Shun's property, giving the cattle to his parents, and retaining for himself his bow, spear, shield, and musical instruments. He then proceeded to visit his sisters-in-law, whom he henceforth considered as his own wives; there he found, to his great astonishment, Shun, sitting upon a bed, and playing the guitar; but recovering from his confusion at this unexpected sight, he said: "I longed to see you." Shun did not upbraid his brother with this horrible crime, but gave him an appointment in the government. For these and similar acts, Shun's filial piety is lauded to the skies; his example had a powerful influence over the whole nation, who were all transformed into dutiful children.

During the reign of Yaou, Shun's attention was directed towards the draining of marshes, in which the indefatigable Yu was engaged. China extended at that time, according to the ancient maps, from 23° to 40° of latitude, and from the 6th degree west from Peking to 19 degrees east. The imperial residence was then in Kee-choo, a territory east of Shan-tung, where Yu commenced the draining of the waters, and the confining of the rivers to their beds. This was a Herculean task, but Yu's wisdom and prudence were equal to it. He visited every place, opened canals, drained marshes, led the smaller rivers into the ocean, burnt down the jungle and weeds, and thus rendered the empire habitable. But this was not all; he examined the nature of the soil, and easily discovered what it was best calculated to produce. Accordingly, he instituted land and other taxes, and ordered the barbarians to pay tribute.*

All this detail may justly excite surprise; for those taxes are levied, not only on grain, and other things, which are necessary for the maintenance of human life, but on articles of the greatest luxury, which are only found amongst the most civilized nations. How a country, which was only a few years before reclaimed from marshes and jungle, could pay so great taxes, with scarcely any inhabitants upon it, we surely cannot explain. It is almost a hopeless task to reconcile all the accounts of the Shoo-king, in which truth is blended with traditional fictions. Besides these taxes, many tracts of lands were allotted for the maintenance of the court, others for the publick weal; and some *hundred acres* for the habitation of barbarians.

The modest Shun, when he was called to participate in the throne, long refused so high an honour, upon the plea of being unworthy to reign, but Yaou conferred upon him the dignity without the least hesitation; yet Shun could not allow himself to be called emperor as long as Yaou lived. His first work was the construction of a sphere, in which the celestial bodies were indicated by precious stones of different colours. A similar sphere is still in the imperial observatory. When he entered upon his duty, he offered sacrifices to the supreme emperor, to hills and rivers, and to the whole host of heaven; thus he was sure that none of the minor divinities could be offended with him. How degraded are even the best of men! On his tour through the empire he paid respect to all the gods by continual sacrifices. These tours, though called hunts, were made with the sole object of examining into the state of the country, and redressing all kinds of grievances. He reduced the criminal laws to a code, which forms at this day the basis of the Chinese laws. Sze-ma-tseen gives some examples of his punishments. To reform the northern barbarians, he sent Kwan-tow, an officer in disgrace, to the Tsung mountain. Kwan, who, without success, engaged in draining the marshes, was exiled to the Yu mountains. In order to render the southern savages more tractable, the San-meaou nation was sent thither to establish colonies amongst them, whilst Kaou went amongst the eastern barbarians to teach them better manners. Thus he inflicted punishment in such a manner, as at the same time to render others happy. As punishments had hitherto been extremely barbarous, consisting in branding the face, cutting off both nose and ears, &c.; he abolished these inhuman modes of punishing, enacted effectual laws to prevent crime, and thus proved a great benefactor to his country. Chinese historians endeavour to persuade us that during the time of Yaou and Shun, no capital crimes were committed, so great was the influence of a virtuous example; but if this had been the case, what necessity existed to abolish cruel punishments which were never inflicted, and to create others equally severe, but not so revolting to human feelings?

When Yaou died, deeply regretted by all the people, Shun withdrew from office for three years, in order to bewail the loss of this great emperor, and to yield the throne to Yaou's son. But the people deserted the son of Yaou to follow Shun, with joy proclaiming him emperor, so that he at length reluctantly yielded to their wishes.

To record all the eulogiums bestowed upon Shun would be tedious; his reign was most peaceful, his subjects were virtuous. He raised to great honours the descendants of the foregoing dynasty, who had long lived in obscurity. In order to see his actions in a true light, he permitted every body to accuse him, whenever they chose; his officers were kept in good order by a tribunal invested with the power of punishing and rewarding. He was not only wise, but also brave. Neither demons nor apparitions could terrify him, nor showers of rain, nor peals of thunder, make him tremble.

To lessen the cares of government, he associated Yu with himself upon the throne. Anxious to fulfil his duty towards the invisible powers, he appointed a minister to officiate at the sacrifices offered to heaven, earth, and the imperial ancestors. If Shun was so wise a prince, we doubt the veracity of his falling into so gross idolatry as worshipping the material heaven and earth. It was his wish to make the most practical doctrines known to all the people, and therefore they were repeated in songs, and thus learnt from early infancy. Considering his ministers as his feet and hands, he was particularly anxious that the executors of his commands should be trustworthy and zealous. To remind them of their duty, he pointed out to them the symbols in their robes of state. Some had a sun, moon, and stars embroidered upon them; "This," he said, "points out the knowledge of which we ought to be possessed, in order to rule well. The mountains indicate the constancy and firmness of which we stand in need; the dragon denotes that we ought to use every means to inspire the people with virtue; the beauty and variety of the colours of a pheasant remind us of the good example we ought to give, by practising the various virtues. In the upper robe, we behold six different kinds of embroidery, which are to remind us of the virtues to be engraven in our breast. The vase, which we are used to see in the hall of the ancestors, is a symbol of obedience and of filial piety; the aquatick herb is a symbol of purity and disinterestedness; the fire, of zeal and love for virtue; the rice, of the plenty which we ought to procure for the people; the hatchet is a symbol of justice in the punishment of vice; and the dresses Foo and Fuh, are symbols of the discernment which we ought to have of good and evil."

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* See the Shoo-king, Part II. Chap. I.

We cannot repeat all his excellent sayings, in his conversations with Yu, Keaou, and others, which are recorded in the Shoo-king—all relate to but one point, the practice of virtue;—virtue is the whole source of happiness. On examining the translation of this work into French, we observe with regret that it is too much embellished, and that whole sentences are supplied. However, a simple translation would be entirely unintelligible to the reader, the style being much too concise and antiquated.

Having established a hospital for the aged, by whose conversation he often profited, Shun died at Ming-teaou on one of his visits through the empire, in the 48th year of his reign, 2208 B. C.

NATURAL HISTORY.

Mammalia—Order Carnivora.

THE CROSS FOX.

Canis fulvus. Var. decussatus.

In a group of animals so intimately connected with each other as the Foxes, in which the difference of size is but trifling and that of form depends only on minute peculiarities, while the colouring of each varies most extensively, though always it would seem through a uniform series of gradations, it is next to impossible to determine by the mere inspection of their skins the precise limits of the species. It is therefore not at all surprising that modern zoologists, with M. Geoffroy Saint-Hilaire at their head, should have looked upon the Cross Fox of America as a distinct species from the Red, from which it differs so remarkably in the colour of its fur. But the observations of living specimens of both in their native country has induced Dr. Richardson to regard the one as a mere variety of the other; and the opportunity which we have ourselves had of making a similar comparison has enabled us to form a decided opinion of the correctness of that gentleman's views upon the subject. On the most careful examination we have been unable to detect any other important difference between them than that which results from their colour; and we are told by Dr. Richardson "that the gradations of colour between characteristick specimens of the Cross and Red Fox are so small, that the hunters are often in doubt with respect to the proper denomination of a skin." Such gradations exist in the excellent series of skins in the Society's Museum; and a similar variation in the European species, from its usual dull tawny to an arrangement of colours exactly corresponding with that of the American Cross Fox, and distinguished by the same name, has been remarked by zoologists from the revival of natural history down to the present day: but although the earlier naturalists, whose ideas of a species were very unsettled, constantly distinguished between these latter races, it seems now to be universally acknowledged that the difference is merely accidental.

The distinguishing peculiarities of the American Cross Fox consist in the dark iron gray of the fore part of its head; the blackish stripe passing from the head along the back and intersected by a similarly coloured band extending downwards over the shoulders; the pale colour of the sides, the tawny occasionally disappearing altogether; and the deep black of the legs and of all the under parts of the body. Its fur is generally considered finer than that of the Red Fox, and the comparative rarity of the animal renders it much more valuable.

In manners and disposition the two animals appear to be precisely the same.

THE SWIFT FOX.

Canis Velox—Say.

The Swift Fox inhabits the open plains of the western part of the United States, particularly those upon the Missouri River, and forms its dwelling by burrowing in the soil. It is called the "Burrowing Fox" by Lewis and Clark; but as all foxes burrow more or less, Mr. Say* thought it proper to give it the name of Swift Fox, since its surpassing swiftness is a much more distinctive attribute of the species.

The velocity of this little animal is most extraordinary, and from all we can learn it surpasses that of all other animals. Its course along the ground has been compared to the flight of a bird; and the animal at full speed is said to resemble a line drawn rapidly over the surface, 'so impossible is it to distinguish any of the parts of its body on account of the surprising velocity of its motion.'

The Swift Fox has not been described by more than one or two naturalists, and fully perhaps by none. Mr. Say gives a full account of the peculiarities of the skull of this animal in order to prove its specifick distinction from the Red Fox. The following short sketch is by Mr. Say.

'The entire length, from the insertion of the superior incisors to the tip of the occipital crest, is rather more than four inches and three-tenths; the least distance between the orbital cavities nine-tenths of an inch; between the tips of the orbital processes less than one inch and a tenth; between the insertions of the lateral muscles at the junction of the frontal and parietal bones half an inch. The greatest breadth of this space on the parietal bones thirteen-twentieths of an inch.

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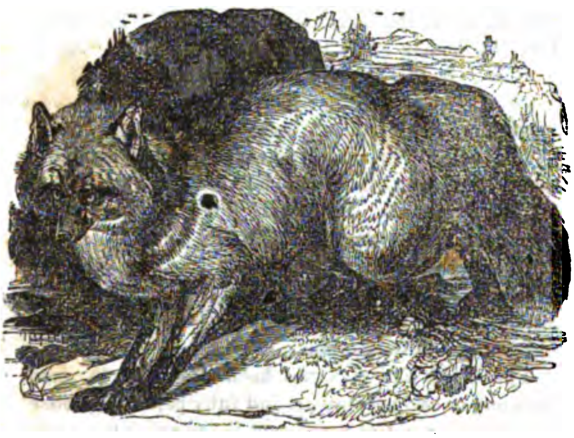
* This distinguished naturalist and scholar recently died at New Harmony, Indiana. He is a loss to the nation; and his death must be particularly and deeply regretted by every lover of Natural History. No man living has done so much for American Zoology as Mr. Say.

'The hair is fine, dense and soft. The head above is fulvous, verging on ferruginous intermixed with gray; the fur being of the first-mentioned colour, and the hair whitish at base, then black, then gray, then brown. The ridge of the nose is somewhat paler, and a more brownish line passes from the eye to the nostrils, (as in the *C. Corsac.*) The margin of the upper lip is white; the orbits are gray; the ears behind are paler than the top of the head, intermixed with black hairs, and the margin, excepting at tip, white; the inner surface is broadly margined with white hairs; the space behind the ears is destitute of the intermixture of hairs; the neck above has longer hairs, of which the black and gray portions are more conspicuous; beneath the head is pure white. The body is slender and the tail rather long, cylindrical and black.'

Mr. Say took notes of the external characters of this animal, but they were unfortunately lost, and he was obliged to set forth the characters of the species from 'nothing but the head and a part of the neck of one individual, and the cranium of another.' We are not aware that the swift fox has ever been taken alive—he has certainly never been exhibited; he is mentioned by various travellers, but they speak of him only as burrowing in the earth, and being astonishingly swift of foot.



THE RED FOX OF THE NORTH.

Canis Fulvus. Desm.

In the Hudson's Bay region a description of Red Fox is found that heretofore has been sometimes confounded with the Red Fox of the states and the common European species, sometimes generically distinguished as *Canis Vulpes.* The great Cuvier is said to have been of opinion, though that opinion was probably founded upon an examination of skins alone, that the Northern Red Fox is a mere variety of the common species, which he thought attributable to the effects of climate. Others, however, are of opinion that the differences in physiognomy and manners, as well as in general appearance, are sufficiently striking to entitle them to be regarded as distinct species Most English writers mistake, however, when they tell us that the range of the species under present consideration extends 'unto the most southern provinces of the United States;' for on the contrary M. Cuvier's observation is true, that this animal is confined to the colder regions of the north.

The Red Fox of the United States, which we described in our last number, is the same species as the common European Fox, which these writers endeavour to distinguish from the Northern Red Fox. The distinction between the two species is said to have been first set forth at the commencement of the present century, by M. Palisot de Beauvais in a paper read before the French Institute. The distinction seems to be tolerably well-grounded; and the characters of the Northern Red Fox as compared with the common and European species are thus defined by Dr. Richardson in his Funa Boreali-Americana.

> "Each were observed to have dark markings on the sides of the muzzle, posterior parts of the ears, and fore part of the legs; the tails of both have an intermixture of black hairs, and are tipped with white. The northern Fox, however, differs in its long and very fine fur, and in the brilliancy of its colours. Its cheeks are rounder, its nose thicker, shorter, and more truncated. Its eyes are nearer to each other. Its ears are shorter, the hair on its legs is a great deal longer, and its feet are much more woolly beneath, the hair extending beyond the claws, which are shorter than those of the European Fox. In short the Northern Red Fox differs from the European one in nearly the same characters that distinguishes the gray American Wolf from the Pyrenean one—in the breadth and capacity of its feet for running on the snow, the quantity of long hair clothing the back part of the cheeks, which in conjunction with the shorter ears and nose give the head a more compact appearance. The Northern Red Fox has a much finer brush than the European one, and is altogether a larger animal."

Several of the peculiarities here enumerated, such as the greater length and fineness of the hair and the woolliness of the feet beneath, which during the winter entirely covers the tubercles, are, it is true, nothing more than the usual consequences of a northern climate; and alone they would by no means entitle the American animal to be regarded as a distinct species. But the remarkable differences in the form of the head and in the expression of the physiognomy, which can only be properly appreciated on a comparison of living specimens, are, it appears to us, decisive of the question. If the northern Red Fox be correctly described by M. de Beauvais, and after him by M. Desmarest and M. F. Cuvier, it is sufficiently distinguished from that of the common species by the prolongation backwards of the line of attachment of the temporal muscles and by several minor peculiarities. The tip of the tail, it should be observed, is not always white; but it is constantly distinguished by a lighter colour than the rest, and appears never to become black as is sometimes the case in the European species.

The Red Foxes of the north, we are informed by Dr. Richardson, are so abundant in the wooded district in the Fur Countries that about eight thousand skins are annually imported from thence into England. They burrow in the earth during the summer, but prefer the shelter of a fallen tree during the winter, probably because the severity of the climate would expose them to the danger of having their burrows frozen up. They hunt chiefly during the night, and prey upon the smallest animals of the rodent order; but they also devour fish and animal food of every kind, and are frequently seen abroad during the day. There seems to be much difficulty in catching them on account of their extreme suspiciousness, which often renders the precautions of the hunter unavailing. The traps which are set for them are occasionally perfumed with assafœtida, castoreum, and similar substances, of the scent of which the Foxes are said to be fond. When pursued they run for a short distance with great swiftness, but their wind soon fails and they are speedily overtaken.*

THE WOLF.
Canis Lupus. Linn.

This sullen and forbidding-looking animal, the most ravenous and ferocious that infests the more temperate regions of the earth, of many parts of which he is the terrour and the scourge, is distinguished from the humble, generous, and faithful friend of man, the domestick dog, by no very remarkable or striking character; and yet there is something in his physiognomy, gait, and habit, which is at once so peculiar and so repulsive, that it would be almost impossible to confound a Wolf, however tame, with the most savage and the most wolflike of dogs. For the separation of the two species, Linnæus had recourse to the tail; and having determined that that of the dog was uniformly curved upwards he attributed to that of the Wolf a completely opposite direction, that is to say, a curvature inwards; assigning, at the same time, a straight or a deflected position to those of all the other animals of the group. The deflected, or down-pointing, direction is, however, equally common in the Wolf with the incurved; and this petty distinction, which has little to do with structure, and still less with habits, is hardly deserving of serious attention. More obvious and more essential differences will be found in the cast of his countenance, which derives a peculiar expression from the obliquity of his eyes; in the breadth of his head, suddenly contracting into a slender and pointed muzzle; in the size and power of his teeth, which are comparatively greater than those of any dog of equal stature; in the stiffness and want of pliability of his limbs; in his uniformly straight and pointed ears; and in a black stripe which almost constantly, and in neariy every variety of the species, occupies the front of the fore leg of the adult. His fur, which differs considerably in texture and colour, from the influence of climate and of seasons, is commonly of a grayish yellow, the shades of which are variously intermingled; as he advances in age it becomes lighter, and in high northern latitudes frequently turns completely white, a change which also takes place in many other animals inhabiting the polar regions.

Entirely dependant upon rapine for his subsistence, the nose of the Wolf is fully equal to that of the sharpest-scented hound. The size and speed of the elk and of the stag are insufficient to protect them from his violence; he pursues them with equal swiftness and cunning, and, when he has succeeded in running them down, finds little difficulty in rendering them his prey. To effect this purpose with the greater certainty he frequently unites himself with a numerous train of his fellows, who are however bound together by no other tie than the common object of their pursuit; and when this is once attained immediately separate and proceed each to his own retreat, whence they again emerge to reunite in the common cause whenever the necessary stimulus is supplied. In inhabited countries he seldom ventures to show himself openly or in packs, but sleeps away the greater part of the day in the shelter of the forest, and only prowls abroad by night when impelled by the cravings of his appetite. The sheep-cote and the farm-yard become then the scenes of his ravages; and such is his ingenuity, and so great the rapidity of his motions, that he will frequently carry off his prey almost before the eyes of the shepherd, although the warning voice of the watchful dog had given timely notice of the approach of the marauder. His ferocity is sometimes carried to such a pitch that he becomes dangerous to man; and when hard pressed by famine, to which in spite of all his skill in the chase and his sagacity in the pursuit of meaner rapine he is by no means a stranger, he will fall at unawares upon the solitary and unprotected traveller, or, prowling about the habitation of the villager, carry off from it his unsuspecting and defenceless children.

Happily for England this formidable beast has long been extirpated from its woods; but the comparative extent of his domain has been thereby but little reduced. It may be roughly stated as comprehending the whole northern hemisphere, of which only very small portions are exempted from his ravages. He is easily tamed when young, and may even (according to M. F. Cuvier, who has published a history of a domesticated individual, bordering in many particulars very closely on the marvellous, but of the truth of which the well known character of that scientifick naturalist is a sufficient guaranty) be rendered susceptible of the highest degree of attachment to his master, whom he will remember after prolonged and repeated absence, and caress with all the familiar fondness of a dog. Such traits as this are, however, to say the least, very uncommon; and he is, even in captivity, generally speaking, ill-tempered and morose.—*T. Menag.*

The wolf, is the enemy of all society; he does not even keep much company with those of his kind. When they are seen in packs together, it is not to be considered as a peaceful society, but a combination for war; they testify their hostile intentions, by their loud howlings, and, by their fierceness, discover a project for attacking some great animal, such as a stag or a bull, or to destroy some more redoubtable watch-dog. The instant their military expedition is completed, their society is at an end; they then part, and each returns in silence to his solitary retreat. There is not even any strong attachments between the male and female; they seek each other only once a year, and remain but a few days together; they always couple in winter; at which time several males are seen following one female, and this association is still more bloody than the former; they dispute most cruelly, growl, bark, fight, and tear each other; and it sometimes happens that the majority kill the wolf which has been chiefly preferred by the female. It is usual for the she wolf to fly from them all with him she has chosen; and watches this opportunity when the rest are asleep.

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* The London Sporting Magazine for December relates the singular fact, that in April 1829 one Will Norris of Feltham near Canterbury, found 'three fine cubs' whose mother had been shot by some 'malicious vulpecide,' which he carried home to his cottage. His wife, 'kind-hearted Nan,' took the little captives into her lap and suckled them. 'Nan continued to suckle the trio till they were able to forage for themselves.' This affords us the first instance to our knowledge of wild animals being nursed by a woman!—Ed. Fam. Mag.

The destruction of this animal is accomplished in various ways. He is hunted in some countries with greyhounds and harriers by men on horseback; he is surrounded and wounded by men and large house-dogs; he is secured in traps; he is poisoned by carcasses, prepared and placed for that purpose, and is caught in pit-falls. "Gesner tells us of a friar, a woman, and a wolf, being taken in one of these, all in the same night. The woman lost her senses with the fright, the friar his reputation, and the wolf his life." All these disasters however, do not prevent this animal's multiplying in great numbers, particularly in countries where the woods are plenty. France, Spain, and Italy, are greatly infested with them; but England, Ireland, and Scotland, are happily set free.

King Edgar is said to be the first who attempted to rid this kingdom of such disagreeable inmates, by commuting the punishment for certain crimes into the acceptance of a number of wolves' tongues from each criminal.* However, some centuries after, these animals were again increased to such a degree as to become the object of royal attention; accordingly Edward the First issued out his mandate to one Peter Corbet to superintend and assist in the destruction of them. They are said to have infested Ireland long after they were extirpated in England; however, the oldest men in that country remember nothing of these animals; and it is probable that there have been none there for more than a century past. Scotland also is totally free.

The species is very much diffused in every part of the world, being found in Asia, Africa, and America, as well as Europe. The wolves of Senegal resemble those of France, except that they are larger and much fiercer than those of Europe. Those of Egypt are smaller than those of Greece. In the east, the wolf is trained up for a show, being taught to dance and play tricks; and one of these thus educated often sells for four or five hundred crowns. "It is said that in Lapland the wolf will never attack a raindeer that is seen haltered; for this wary animal, being well acquainted with the nature of a trap, suspects one whenever it perceives a rope. However, when he sees the deer entirely at liberty, he seldom fails to destroy it.

"The wolf of North America is blacker and much less than those in other parts of the world, and approaches nearer in form to the dog than those of the ordinary kind.† In fact they were made use of as such by the savages till the Europeans introduced others; and even now, on the remoter shores, or the more inland parts of the country, the savages still make use of these animals in hunting. They are very tame and gentle; and those of this kind that are wild, are neither so large nor so fierce as a European wolf, nor do they ever attack mankind. They go together in large packs by night to hunt the deer, which they do as well as any dogs in England; and it is confidently asserted that one of them is sufficient to run down a deer.‡ Whenever they are seen along the banks of those rivers near which the wandering natives pitch their huts, it is taken for granted that the bison or the deer are not far off: and the savages affirm that the wolves come with the tidings, in order to have the garbage, after the animal has been killed by the hunters. Catesby adds a circumstance relative to these animals, which, if true, invalidates many of Mr. Buffon's observations in the foregoing history. He asserts, that these being the only dogs used by the Americans, before the arrival of the Europeans among them, they have since engendered together, and that their breed has become prolifick; which proves the dog and the wolf to be of the same species. It were to be wished that this fact were better ascertained; we should then know to a certainty in what degree the dog and wolf resemble each other, as well in nature as in conformation; we might then, perhaps, be enabled to improve the breed of our dogs, by bringing them back to their native forms and instincts; we might, by crossing the strain, restore that race of those bold animals which the ancients assure us were more than a match for the lion."

However this animal may be useful in North America, the wolf of Europe is a very noxious animal, and scarce any thing belonging to him is good, except his skin. Of this the furriers make a covering that is warm and durable, though coarse and unsightly. His flesh is very indifferent, and seems to be disliked by all other animals, no other creature being known to eat the wolf's flesh except the wolf himself. He breathes a most fœtid vapour from his jaws, as his food is indiscriminate, often putrid, and seldom cleanly. In short, every way offensive, a savage aspect, a frightful howl, an unsupportable odour, a perverse disposition, fierce habits, he is hateful while living, and useless when dead.—*Goldsmith.*

The common wolf is about four feet and a half in length, including the tail, which is rather more than a foot long. The height, before, is two feet three inches, behind, it is two feet four inches. The tail is bushy bending downwards, having upon it hairs upwards of five inches in length.—*Godman.*

This animal as we have seen infests the whole of North America and indeed nearly all forest countries. When the Pilgrim fathers first landed upon this continent, and settled amid forests that

'Ne'er had felt the encroaching axe,'

their lonely cabins were unceasingly disturbed by the nightly howlings of these hideous animals. During winter, when food was most difficult to be procured, the primitive settlers were scarcely enabled to preserve their flocks and herds from the attacks of the wolves—the boldest house-dog would be overcome by them, and ordinary enclosures were no defence for their cattle, sheep or hogs. When in packs they were not afraid to attack men upon horseback and destroy both horse and rider; but the horse commonly resists their attacks with success. The weapon of the horse's defence is his heels; and it is said that upon the plains of the Missouri and the North-western Territory, not unfrequently may be observed a troop of wild horses collected together and standing in a line with their heels all towards the enemy, successfully defending themselves against quadruple their number. As American settlements have extended themselves, and enterprise and industry have laid bare the bosom of the earth, the wolf has retired. He is now found in considerable numbers only in the wilds of the west; stragglers, however, are occasionally found in New England, and in fact in all parts of the states where there are wooded and mountainous retreats. These stragglers seem to be more ferocious and blood-thirsty than their brethren who roam in less restricted limits; frequently have we known in New England twenty and thirty sheep killed in one night, and it has been supposed by *one* wolf that must have taken greater delight in destroying the lives of the sheep than in sucking their blood. We have known five hundred sheep killed in one neighbourhood before the ferocious destroyer could be discovered; and the beast is frequently hunted several days by hundreds of villagers, and chased perhaps thirty and forty miles before he is arrested. Such hunts frequently occur in New York, Pennsylvania, and the middle states.

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* British Zoology, p. 62.

† Brooke's Natural History, vol. i. p. 198.

‡ Dictionnaire Raisonnec. Loup.

It may be interesting to relate the manner in which they collect their forces, when one finds himself insufficient to secure his prey. The father of the writer was once travelling on horseback in the neighbourhood of Kingston U. C., and found himself on an excessively dark night in a trail path in a wilderness of pines. He was suddenly surprised by a most hideous howl, and the fiery eyes of a hungry wolf that appeared but a few yards from his path. The animal after surveying his prey, darted off apparently in the direction whence he approached. The gentleman proceeded leisurely on his way for about half an hour, when he was suddenly surrounded by a pack of twelve, doubtless brought upon him by the same animal that first espied him. The affrighted horse wheeled about as speedily as possible and kicked in every direction—then he would dash forward a short distance and stop and kick again —the gentleman discharged his pistols at his enemies, two or three times, which with the kicks of the sagacious horse, seemed to irritate the beasts to such an extent, that they all fell to snarling and fighting amongst themselves with the most terrible ferocity. During these family quarrels the gentleman approached the open country and escaped the jaws of his audacious enemies thus brought together by an informer, whose own blood probably was made to atone for the sin of disappointing his brethren.

We recollect a story that was told of similar conduct in a pack of wolves, that exhibited themselves to a fiddler in Indiana. The musician had been to play for a Hoosher dancing party, and was returning home in the night through a piece of woods several miles in extent. An individual wolf presented himself to the gentleman of the violin in a manner similar to the one just described—retreated in like manner, and his return was signalized by precisely such a snarling, disorderly and ferocious company. They surrounded the musician playing all kinds of freaks and pranks, and perpetrating all kinds of discordant musick. The musician, reminded in this moment of peril of the old couplet "musick hath charms," &c., drew forth his instrument, and applying his ear and his bow with due taste and skill, his 'savage breasted' companions seemed to be 'soothed' and softened by a most harmonious flow of melody, that of a sudden filled and quieted that dark and mighty forest. The musician continued his strains and walked on as rapidly as possible, while the charm preserved his person from the attacks of his unenviable company, who danced about on every side and kept up a continual chorus of snarls and screeches. Our traveller eventually approached an untenanted log hut, into which he ran for shelter; the whole pack following him in, he immediately scrambled up to the upper floor where the timbers and a few boards laid across them afforded him a secure resting-place. Here he sat and played for the savages below, who in their fighting and freaks had shut the door and fastened themselves in. The musician continued in this way until daylight when he gladly found his way through the roof and escaped. He soon returned with a friend, provided with guns, and destroyed the remainder of the pack; three of them having been killed by their companions.

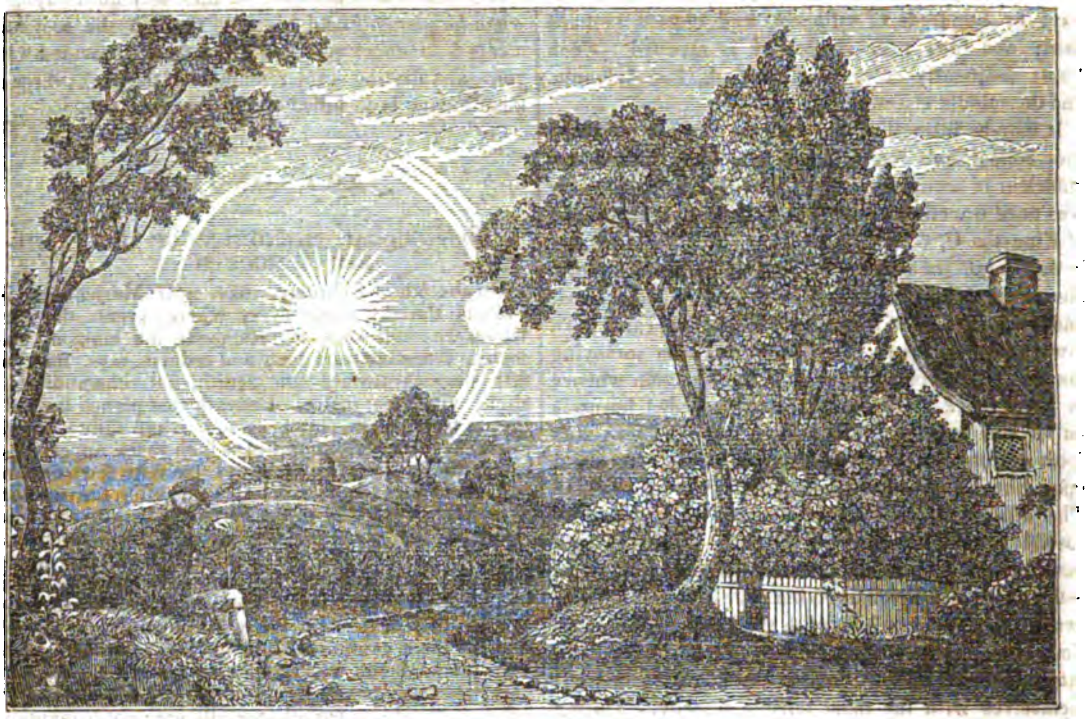
ASTRONOMY.

ATMOSPHERICAL PHENOMENA OF THE PARHELIA, OR MOCK SUNS.

On the 5th of February, 1674, near Marienberg, in Prussia, the sky being every where serene, the sun, which was still some degrees above the horizon, was seen to lance out very long and reddish rays, forty or fifty degrees towards the zenith, notwithstanding it shone with great lustre. Beneath this planet, towards the horizon, there hung a somewhat dilute small cloud, at the inferiour part of which there appeared a mock sun, of the same apparent size with the true sun, and of somewhat a red colour. Soon after, the true sun descending gradually to the horizon, towards the said cloud, the spurious sun beneath it grew clearer and clearer, insomuch that the reddish colour in this apparent solar disk vanished, and put on the genuine solar light, in proportion as it was approximated by the genuine disk of the sun. The latter, at length, passed into the lower counterfeit sun, and thus remained alone This phenomenon was considered the more extraordinary, as it was perpendicular under the sun, instead of being at its side, as parhelia usually are; not to mention the colour, so different from that which is usual in mock suns, nor the great length of the tail, cast up by the genuine sun of a far more vivid and splendid light than parhelia used to exhibit. This appearance was soon followed by an exceedingly intense frost, which lasted till the 25th of March, the whole bay being frozen up from the town of Dantzick to Hela in the Baltick Sea.

On the 28th of August, 1698, about eight o'clock in the morning, there was seen, at Sudbury, in Suffolk, three suns, which were then extremely brilliant. Beneath a dark watery cloud, in the east, and nearly at its centre, the true sun shone with such strong beams, that the spectators could not look at it; and on each side were the reflections. Much of the firmament was elsewhere of an azure colour. The circles were not coloured like the rainbow, but white; and there was also, at the same time, higher in the firmament, and towards the south, at a considerable distance from the other phenomena, the form of a half moon, but apparently of double the size, with the horns turned upward. This appearance was within of a fiery red colour, imitating that of the rainbow. These phenomena failed gradually, after having continued about two hours.

Two mock suns, an arc of a rainbow inverted, and a halo, were seen at Lyndon, in the county of Rutland, on the 22d of October, 1721, at eleven in the morning. There had been an aurora borealis the preceding night, with the wind at west-south-west. The two parhelia, or mock suns, were bright and distinct, and in the usual places, namely, in the two intersections of a strong and large portion of a halo, with an imaginary circle parallel to the horizon, passing through the sun. Each parhelion had its tail of a white colour, and in direct opposition to the true sun; that towards the east being 20 or 25 degrees long, and that towards the west 10 or 12 degrees, both narrowest at the remote ends. The mock suns were evidently red towards the sun, but pale or whitish at the opposite sides, as was the halo also. Still higher in the heavens, was an arc of a curiously inverted rainbow, about the middle of the distance between the top of the halo and the vertex. This arc was as distinct in its colours as the common



ATMOSPHERICAL PHENOMENA OF THE MOCK SUNS.

rainbow, and of the same breadth. The red colour was on the convex, and the blue on the concave of the arc, which seemed to be about 90 degrees in length, its centre being in or near the vertex. On the top of the halo was a kind of inverted bright arc. This phenomenon was seen on the following day, and again on the 26th. On the 11th of the preceding month, (September) a very splendid and remarkable aurora borealis, presenting truly unaccountable motions and removals, was witnessed in Rutlandshire in Northamptonshire, and at Bath.

METEORICK STONES.

Solid masses, composed of various mineral substances, are often seen to descend from the higher regions of the atmosphere. The fall of such bodies was for a long time doubted, and the prevailing opinion, as to their reality, regarded as a popular superstition. But all the particulars of the phenomenon have been established in such a manner, that the fact can no longer be questioned.

The most remarkable circumstances respecting these substances is, that they so exactly resemble each other; being all of them pyriteous masses glittering with metallick grains. The exteriour surface is black, as if it had been burned, while the interiour is of a yellowish white. They all have very nearly the same specifick gravity, which may be fixed at 3,591, water being unity. On being analyzed, they always present the same ingredients, and in nearly the same proportions. They are composed of *silex*, *magnesia*, *sulphur*, *iron in a metalick state*, *nickel*, and some particles of *chrome*.

These common characteristicks strongly indicate a common origin. It is, moreover, to be remarked that iron is hardly ever met with in a metallick state, in terrestrial bodies. Volcanick substances do not contain any which is not oxydated. Nickel is also very rare, and never found at the surface of the earth. Chrome is still more rare. These considerations make it probable that the substances in question have an origin foreign to our globe, or at least that they are not brought together by any phenomena hitherto observed.

These solid masses seem to proceed from a meteor-like appearance in the air. They are in fact ignited or inflamed bodies which suddenly present themselves in the atmosphere, and move with a velocity equal, in some instances, to that of the sun in its orbit, or twenty miles in a second. Their direction is generally inclined to the horizon. After emitting an intense light for a few moments, they explode with a loud noise, at a height from 18 to 100 miles above the surface of the earth. This is ascertained by their parallaxes, as deduced from several simultaneous observations, made at different places, where they were visible at the moment of explosion. They do not appear to follow any determinate direction with respect to the earth's motions, but are seen moving towards all points of the compass.

As yet we are ignorant of the true origin of these masses, and various hypotheses have been invented to explain them. Laplace thinks they may be thrown upon the earth by lunar volcanoes. It is found by calculation that this would only require a projectile force about four times that of a cannon ball. This force meeting with little resistance from the very rare atmosphere of the moon, would be sufficient to send a body without the sphere of the moon's attraction, and then it would be brought to the earth's surface by gravity. Now it is by no means improbable that lunar volcanoes may give such an impulse to a body, since those on the earth are capable of a much greater force, although the greater intensity of gravity at the earth's surface, and especially the enormous resistance of our atmosphere, are such as to prevent a corresponding effect. By thus ascribing to meteorick stones a common origin, we account in some degree for the sameness of their composition.

Some philosophers maintain the opinion that the substances under consideration are small planets or fragments of planets, carried along in space like the other heavenly bodies, which, upon entering the earth's atmosphere, become enflamed by friction, gradually lose their velocity, and then fall to the earth by the influence of gravity. According to this hypothesis, the meteors called shooting stars, are revolving bodies or terrestrial comets, which enter our atmosphere at great heights, but with a velocity sufficient to traverse it, so that they are only inflamed on their passage. Time will probably throw some light upon this subject, especially since there is now no prejudice among scientifick men to prevent the multiplication of observations. —*Biot.*

The Dublin Penny Journal furnishes the following information in relation to nickel, one of the ingredients found to compose meteorick stones.

Nickel in its pure state is a fine white metal, very malleable, nearly as brilliant as silver, and more attractable by the loadstone than iron; indeed magnetick needles have been made of purified nickel, and have been esteemed more than those of steel, as being less liable to be affected by a damp atmosphere. The most abundant mines of this metal are in Germany, but it has lately been raised in the parish of St. Ewe, Cornwall, where it occurs at a depth of twenty-five fathoms. It is rather a curious circumstance that all the specimens that have been examined of the stones which have been said to fall from the atmosphere, contain iron alloyed with nickel. These stones, which at different periods have been seen to fall on every quarter of the globe, are supposed by some writers to be cast from a volcano in the moon. So lately as 1808, a shower of them fell in Normandy which covered an extent of three quarters of a league long, and half a league broad. Nickel is employed in China in making *white* copper, which is a beautiful metallick compound, but it has not been used much elsewhere, excepting in the potteries, where the French manufacturers of porcelain procure from it a very delicate grass-green, which, like other metallick colours, bears the intense heat of their ovens without injury. A hyacinthian colour is also given to flint-glass with this metal, and it might be mixed with iron to great advantage, as an alloy of these two metals would not rust like common iron. The Chinese employ it in conjunction with copper, to make children's toys, and the valuable qualities lately discovered in it show that it might be applied to many important uses, particularly for surgical instruments, compass-needles, and other such articles, as it is not at all liable to rust. Should an easy method of working it ever be discovered, we may possibly find this to be better calculated for a variety of purposes than any other metal.

MATHEMATICAL GEOGRAPHY.

OBLATE SPHEROIDAL FIGURE OF THE EARTH—CAUSE OF THIS FIGURE—CENTRIFUGAL FORCE.

The various phenomena which indicate the nature of the earth's shape have been already described. They are sufficient to establish in a general way the roundness of the earth, but they are at the same time of that vague and indefinite character, as to be incapable of solving the more difficult problem of the earth's specifick and exact shape. In order to determine this, it has been necessary to resort to experiments of an extremely delicate and tedious description, and to call in the aid of complex mathematical calculations founded upon the facts which the experiments have brought to light. The attention of some of the most eminent philosophers of Europe has for many years been given to this subject; and although the true figure of the earth cannot be considered as even yet determined with all the precision that is desirable, it is now conclusively proved that the earth is not a perfect sphere, but of an oblate-spheroidal* form, bulging out at and about the equator, and flattened at the poles; and that the equatorial diameter is longer than the axis or polar diameter. The excess of the equatorial above the polar diameter represents, when compared with the whole diameter, the quantity by which the figure of the earth deviates from a perfect sphere; it is called the earth's ellipticity or compression.

The discovery and proof of the earth's elliptical shape, and the laborious undertakings engaged in for determining the quantity of it, occupy some of the most interesting pages in the history of science. It is not perhaps to be much regretted that the person who first started the idea of the earth's spheroidal shape should be unknown. The first notion of it was in all probability nothing better than one of those happy conjectures which have been verified by subsequent proofs; but the name of Newton is as intimately allied with the discovery of the earth's true figure as with that of universal gravitation. In both cases the idea had been already entertained by several philosophers, but it was Newton who redeemed the truth from conjecture, and established it upon the basis of demonstration: with respect to the figure of the earth, he proved, from admitted principles and facts, that it must of necessity be an oblate-spheroid, and assigned a ratio between the equatorial and polar diameters.

The true figure of the earth is that which the particles composing it must assume in order to be in a state of equilibrium or rest: the figure, therefore, depends essentially upon the forces which act upon these particles. The principal of these forces is the mutual attraction which subsists between the particles themselves. Any other force which acts in a different direction to this principal force, or with unequal intensity upon different particles, is a disturbing force; it disturbs and deranges that state or figure which the whole mass of the earth would assume if affected only by the mutual attraction of the component particles.

The method of conducting the investigation of the true figure of the earth, is one which is very usual in mechanical philosophy. The most simple and striking characteristicks of the problem are singled out and considered alone, and the result obtained from them is afterwards varied and modified by the introduction of such minor and more complex conditions as are suggested by the problem in its true and practical form. In this manner, in the science of mechanicks, the first principles and ground-work truths are ascertained, upon the supposition that the parts of machines are without weight, and that there is no such thing as friction, and the effect due in the practical result to these and other cicumstances is estimated afterwards.

In attempting to determine the true figure of the earth, it has accordingly been assumed in the first instance, that the earth is a body consisting only of fluid particles which move easily among themselves, and that the density of the particles, or the quantity of matter contained in the same space is the same throughout, and that the earth is in a state of rest. If this were the case, the only form in which equilibrium could take place among the particles which compose the earth, and which exert a mutual and equal attraction upon each other, is a perfect sphere. This may be exemplified by adverting to the familiar circumstance of drops or globules of water, or of quicksilver, upon a perfectly smooth and dry plain; by the force of mutual and equal attraction, the particles of which they consist, dispose themselves in a globular form. It is true, that the form of these drops is not perfectly spherical, but is rather flattened at the top; because the force of gravity which acts without an equal resistance upon the upper particles, makes them press down upon the lower, and thus deranges the effect which would be produced by their mutual attraction alone: but the fact is sufficient as a popular illustration of this conclusion,—that fluid particles of an equal density, not affected by any external and partial force, would assume the form of a perfect sphere as that of a state of equilibrium.

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* An oblate spheroid is a solid body which may be conceived to be formed by the revolution of an ellipse or oval about its lesser axis.

Now in this statement it is evident, that three conditions have been introduced which are not verified in the actual state and circumstances of the earth.

These are, 1st. That the earth is a fluid body. 2d. That it is of the same density throughout. 3d. That it is in a state of rest. These conditions, therefore, not being fulfilled, it is necessary to inquire what alteration ensues in the form of equilibrium.

Let us first take into consideration the fact of the earth not being in a state of rest, but having a double motion, one in its orbit, the other about its axis. The existence of motion in inanimate matter always indicates the impression of an external force. The force represented by this motion in the earth, is therefore in addition to that of the mutual attraction of its component particles. In order, however, that it should alter the form of equilibrium, it is clearly necessary that the additional force should be not merely external but partial. The earth's motion in her orbit has therefore no effect of this kind; because, acting *equally* upon all the particles, it can have no influence upon their mutual relation. The other motion of the earth about its axis gives rise to very different considerations. This motion is performed in a plane perpendicular to the axis: so that the particles of which the earth is composed move in circles, the planes of which being perpendicular to the axis, are either coincident with, or parallel to the plane of the equator.

Thus a particle at the equator, moves in the equatorial circle, and a particle lying between the equator and the pole, moves in a circle which is parallel with the equator. And as the circles which are thus described by various particles, are all described in the same time (namely, the time of an entire revolution of the earth about its axis or a sidereal day,) it is evident that different parts of the earth will be differently affected by the motion of rotation:—immediately under the poles there exists (so far as this motion is concerned) a state of perfect rest; but in passing from the poles to the equator, the motion of rotation begins and becomes quicker and quicker (because in the same time a greater space or circle is described;) till arriving at the equator, which is the largest circle, the plane of which is perpendicular to the axis, it has obtained its greatest velocity. This motion of rotation gives to all the particles affected by it, a tendency to fly off from the centre of rotation, and communicates to them what is therefore called a *centrifugal* force. The mutual attraction of the earth's particles, or their gravitating force, is directed *towards** the centre of the earth; this is called a *centripetal* or centre-seeking force. The combination of these two forces, the centrifugal and centripetal, will, as they are in different directions, and as the former acts in the partial manner we have described, produce a material alteration in the form, which, under the action of the latter alone, the particles of the earth would have assumed as a state of equilibrium. For it is evident that as the centrifugal force caused by the motion of rotation is in diminution of the centripetal force of gravity, the particles affected by this centrifugal force must give way to those which are not affected by it, and thus be pushed away from the centre of the earth; those also which are more affected by it, will give way to those which are less so, and will recede still farther from the centre of the earth; so that in order now to preserve equilibrium among themselves, there must be a decrease in the *number* of particles which have the greatest *individual* gravitating force, and a proportionate increase in the number of particles which have a diminished gravitating force.

There are two reasons for the centrifugal force caused by the motion of the earth about its axis, being greatest at the equator, and gradually diminishing towards the poles. The motion of the earth on its axis being every where in a plane to which the axis is perpendicular, the particles lying under the equator move in the circle of the equator; all other particles between the equator and the poles move in circles parallel with the equator. Hence, particles moving in the equator have the greatest velocity and the greatest centrifugal force; those nearer the equator a greater velocity and a greater centrifugal force than those particles which are more distant from the equator. Moreover, the direction of the centrifugal force communicated by this motion is always opposite to the direction of the radius of the different circles in which the particles move. Now gravity or the centripetal force is always in a direction perpendicular to the surface, and therefore it is only at the equator, that this is exactly in an opposite direction to the centrifugal force. Hence it follows, that in the equatorial regions, where the directions of gravity and of the centrifugal force are both perpendicular to the surface, the two forces become altogether opposed to each other, and the whole amount of the centrifugal force of rotation takes effect in diminution of the force of gravity. But in parts distant from the equator a portion only of the centrifugal force and that in its diminished state, acts in opposition to the force of gravity; the rest of it is in the direction of a tangent, and tends towards the equator.

In order, therefore, that equilibrium may now be preserved among the component particles of the earth, a great accumulation of particles takes place in the equatorial regions, which by their number compensate their deficiency in gravitating force. And this effect is increased by that part of the centrifugal force acting between the poles and the equator, which is in a tangent direction to the earth's surface, and which tends to thrust down the particles on which it acts towards the equator. Hence the equatorial regions are elevated above the polar, and the height of all other intermediate parts is in some proportion of the distance of those parts from the equator. This is the alteration produced in the figure of equilibrium, by the diurnal rotation of the earth upon its axis.

But the earth being neither altogether fluid, nor of the same density throughout, we must introduce some qualifications into the result we have just arrived at. The earth being partly solid, the particles of which it is so far composed do not move easily among themselves, but have an attraction of cohesion which opposes a certain resistance to the operation of the centrifugal force caused by its motion of rotation. This neutralizes and destroys part of the centrifugal force, and makes the earth's ellipticity to be less than it would be if the earth were altogether fluid. But the centrifugal force is not *altogether* destroyed by the attraction of cohesion; for it must have elevated even the solid parts of the equatorial regions; were it not so, the waters of the ocean, not being restrained in their motion by the same attraction of cohesion, would all have set towards the equator in order to restore the equilibrium which, by the diminution of the centripetal force of gravity there, had been disturbed, and would thus have overflowed the land at the equator and left the polar regions dry. It may here be remarked, that the two constant currents in the sea, which are observed to set from both poles towards the equator, may perhaps be accounted for, by the action of that part of the centrifugal force which is in the direction of a tangent to the earth's surface and towards the equator. The waters of the sea, having no attraction of cohesion, would obey the impulse of this force freely, as it is not opposed to the force of gravity.

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* This is not strictly true: the direction of gravity is always perpendicular to the surface, and therefore, (the earth not being a sphere) it does not pass through the centre, but only near the centre; but this distinction may be disregarded in the present explanation.

The *westerly* set of the same currents may be ascribed to their continually advancing into regions which have a greater *easterly* motion of rotation.

The effect produced by the varying density of the earth, which increases towards the centre, has been proved by Clairaut, a celebrated French mathematician, to be a diminution of the oblateness of the earth, so that from this cause the height of the equatorial regions is somewhat less than on the supposition of an equal density; which is contrary to what Newton supposed would be the effect of an increase of density towards the centre.

The result of Newton's inquiry into the figure of the earth was, that the equatorial diameter of the earth is to the polar as 230 : 229; from this ratio the ellipticity of the earth would be expressed by the fraction $\frac{1}{229}$; or the polar diameter would be less than the equatorial by the 229th part of the whole, and the equatorial regions would be about 17 miles higher than the polar.

The whole amount of centrifugal force varies as the velocity; for motion or velocity is the producing cause of it, and the velocity of rotation of different parts of the earth's surface varies as the circle of rotation, and therefore varies as the radius of that circle:—hence the centrifugal force at any point varies as the sine or the complement of the latitude, or the *entire* centrifugal force varies as the cosine of the latitude.

OBLATE FIGURE OF JUPITER, SATURN AND MARS—PENDULUM EXPERIMENTS.

In the foregoing chapter we have explained the causes which have produced the earth's ellipticity. We now proceed to the various evidences of this fact which have been derived from observation and experiment.

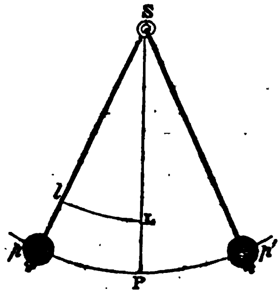
As the same causes must, under similar circumstances produce similar effects, it was just to suppose that if the reasoning by which the earth's ellipticity is established be correct, the other planets of the solar system would exhibit the like appearance of a flattening at their poles and a bulging out of their equatorial parts; for their component particles are under similar circumstances of mutual attraction, of equilibrium, and of rotation about an axis.* This was the rather to be looked for, because of the analogy or resemblance which is to be traced in the principal features of the solar system. Thus, among other analogies, the orbits of all the planets revolving round the sun are elliptical; the squares of their periodick times, or the times of their revolutions, are in proportion to the cubes of their mean distances from the sun, and the forces by which they gravitate towards the sun are inversely as the squares of those distances. The supposition of an ellipticity in the planets similar to that which is observed in the earth, was first verified in the planet Jupiter. This planet completes his daily rotation about his axis in 9 hours and 56 minutes; the centrifugal force exerted upon him is therefore considerably greater than that which affects the earth; and the density of Jupiter is less than that of the earth. Hence the figure of Jupiter ought to be much more oblate or compressed at the poles than the earth is. This was found to be the case by an astronomical admeasurement of his diameters. The equatorial diameter of Jupiter is to the polar as 13 : 12, and is longer than the polar by about 6230 miles. Saturn and Mars exhibit the same oblate-spheroidal appearance. The other planets do not offer facilities for ascertaining the effect of a centrifugal force upon them. With respect to the moon, her motion about her axis is too slow (being performed in 29½ days) to produce enough centrifugal force to make a difference in her diameters, arising from this cause, observable. She has, it is true, a spheroidal form, but this is owing to the attraction of the earth, which is four times greater than what is caused by her motion of rotation.

The horizontal parallaxes of the moon furnish another though subordinate proof of the earth's spheroidal form. If the earth were a perfect sphere, these parallaxes would be the same for all places upon the earth's surface—if a spheroid, they would be different at different places; and this is actually the case; so that the same heavenly body which by her eclipses indicates the earth to be round, by her parallaxes shows it to be not truly spherical.

But the more direct evidence of the existence of a centrifugal force, and of the earth's ellipticity, and the means of determining the amount of it, are to be looked for in the experiments made with the pendulum, and in the measurement and comparison of the lengths of degrees of the meridian in different latitudes.

The nature of the evidence afforded by pendulum experiments may be explained by a reference to a few very obvious principles.

The centrifugal force caused by the earth's rotation is (we have seen) greatest at the equator, and decreases towards the poles; this centrifugal force, either in its whole quantity or in part, acts in a direction opposite to that of gravity, and therefore, being greatest at the equator, it diminishes the force of gravity at the equator by the greatest quantity. Hence, bodies are lightest at the equator, and their weight gradually increases as we proceed towards the poles, where it is greatest. The pendulum of a clock performs its vibrations, or swinging motion to and fro, by being acted upon by the force of gravity.



If, therefore, two pendulums Sp, Sp', be taken of the same length, and the same substance or density, and be hung from the same point S, and SP be the vertical position of both, and they be made to fall from equal distances from P, it is evident they will move through the equal spaces Pp and Pp' in exactly the same time, because the force which causes their descent (namely that of gravity) is equal in both cases. But if one of these pendulums (Sp) be made to swing at the equator (being let fall from the same height as before,) and the other (Sp') at some place between the equator and the poles (say at Paris,) the time of Sp arriving at P will be longer than the time in which Sp' will move through the same space; because the force of gravity, which causes and accelerates the motions of both, is less at the equator than at Paris. But if we shorten the equator pendulum by some determinate quantity, it may be made to perform its vibrations in the same time with the Paris pendulum; for it will then have to describe a similar arc of a smaller circle or a less space, and a less accelerating force will enable it to describe this space in the same time. Such is the effect of the centrifugal force upon the vibrations of the pendulum in different latitudes. The existence of it was first detected by Richter, a French astronomer, who, in the year 1672, was sent to make astronomical observations in the island of Cayenne, which is not quite 5° north of the equator. Sir Isaac Newton has, in his Principia, described the particulars of the discovery. He says, that when Ritcher was, in the month of August, observing the transits of the fixed stars over the meridian, he found his clock to go slower than it ought, in respect of the mean motion of the sun, at the rate of 2′ 28″ a day. Therefore, setting up a simple pendulum to vibrate in seconds, which were measured by an excellent clock, he observed the length of that simple pendulum; and this he did over and over every week for ten months together; and upon his return to France, comparing the length of that pendulum with the length of the pendulum beating seconds at Paris, he found it shorter by 1¼ line.* In accounting for this difference in the length of the two pendulums, Newton allowed ⅙th of a line as the utmost that could be attributed to the extension of the pendulum by the heat of the climate; the difference, or 1 1/12 line by which this pendulum was shorter than the Paris one, was made necessary by the less gravity of bodies at and near the equator. From this fact he obtained the same conclusions he had before deduced from theory alone, namely, that the equatorial diameter of the earth was greater than the polar by the 229th part of the whole diameter. Since that time observations upon the lengths of pendulums beating seconds in different latitudes, have been made with great assiduity by scientifick men of all countries; but recent experiments tend to show that the earth's ellipticity is not so great as 1/229; the fraction 1/288 is the value which results from the latest investigations.

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* We must except from the generality of this remark the planets Uranus, or Georgium Sidus, which is too distant, and Juno, Vesta, Ceres, and Pallas, which are too small to admit of any observations by which to ascertain whether they revolve about an axis or not.

LENGTH AND MEASUREMENT OF DEGREES UPON THE EARTH'S SURFACE.

The remaining evidence of the earth's ellipticity is the different lengths of degrees of the meridian arc in different latitudes.

A degree of a meridian is that portion of it which must be travelled over, in order to change the altitude of any particular star, by the 360th part of the imaginary meridian circle in the heavens: if the spaces travelled over in different parts of the same terrestrial meridian, in order to produce this change in the altitude of a star, be not equal to one another, the terrestrial meridian cannot have the same curvature in every part, and is therefore not a circle; and consequently, the figure of the earth on the surface of which the meridian is traced cannot be a perfect sphere. Now it has been found by trial, that to raise the pole star by a quantity equal to a celestial degree, an observer must travel over a greater and increasing space as he proceeds from the equator to the pole. Hence it follows, that the degrees of a meridian line on the earth, or degrees of latitude, gradually increase from the equator to the pole; the meridian has, therefore, less curvature at the poles than at the equator, and the earth upon which it is traced is not a perfect sphere, but is flattened at the poles.

It is not to be immediately concluded from this that the earth is a regular oblate-spheroid; but it has been justly remarked, that, though it is only by experiment that the true figure of the meridian can be discovered, it has been found necessary to assume hypothetically (or by way of supposition,) that its figure is the curve next in simplicity to the circle, viz. the ellipse, and also to suppose that the earth is a spheroid generated by the revolution of this ellipse about its shorter axis; for, in many complex cases, this mode of getting near the truth by probable suppositions, has been found the simplest and most convenient to be pursued; the only caution to be observed, is to submit the supposition first made to the test and correction of actual experiment. This caution has been carefully attended to in the matter we are discussing, by the measurement and comparison of degrees at various parts of the earth's surface.

In the measurement of a degree or of an arc of a meridian, many difficulties present themselves in the way of an *actual* and *mechanical* measurement. The general features of a country are such as to make any attempt of this kind unadvisable; a great number of almost conjectural allowances must be admitted into such a plan of operations, which forbid our placing much confidence in the result. The first modern measurement, having any just claim to accuracy, was, however, made in this manner. This was the measurement by Norwood, in 1635. The arc measured was that part of the meridian which lies between London and York. The difference of the latitudes of these cities was first ascertained; this gave the number of degrees in the arc to be measured; the distance between the two cities was then actually measured; and the turnings and windings of the road, and the ascents and descents, were allowed for afterwards. The length of a degree thus determined was 122,399 English yards; which, notwithstanding the extreme liability of this method to errour, is not very far from the truth; according to the latest determinations, the length of a degree between these latitudes is 121,660 yards. The only other instance of the *actual* measurement of an arc of the meridian is that of Messrs. Mason and Dixon. They measured an arc of the meridian of 179,359,313 English yards in length, in the state of Pennsylvania. An account of this measurement is given in the Philosophical Transactions for the year 1768. The other and more accurate mode of finding the length of a degree, is a combination of actual measurement and of trigonometrical calculations founded upon it. All geodesical* operations (as they are called) are now conducted according to this method. Two places are selected, which lie under the same meridian, or nearly so; the difference of their latitudes, which gives the number of degrees in the arc to be measured, is then ascertained with the utmost precision. A base line of a few miles in extent, and at some little distance from the meridian arc, is then very carefully measured; this is the only *actual* measurement which need be made. The extremities of this base line are connected with the extremities of the meridian arc, by imaginary triangles; the sides of which are not measured, but, by the aid of the base line, and by means of the angles of the triangles, which are all ascertained by an instrument for measuring angles, are determined by trigonometrical computation. This mode of ascertaining the length of the meridian will, however, be set in a clearer light by following the steps of the process in the subjoined figure.

Let M *m* represent a meridian arc; the difference of latitudes of the two extremities, M and *m*, being found, the length of a degree in the latitude of M and *m* will be the length of the whole arc divided by the number of degrees contained in it.

A level plain is then to be selected, on which a base line A B is measured; the two extremities of this line are to be connected with the two extremities of the arc M*m*, by a series of triangles. For this purpose convenient stations are fixed upon, such that the three stations situate in the three angles of every triangle may be visible to each other. Let C, D, E, be the stations fixed upon, these are supposed to be connected together, and with the points M, *m*, by the imaginary lines which form the various triangles ABC, BC*m*, ACD, CDE, and DEM. Then the angles by which the two stations C and B, appear to be separated from each other when viewed from the station A, is observed. This observation gives the angle C A B of the triangle

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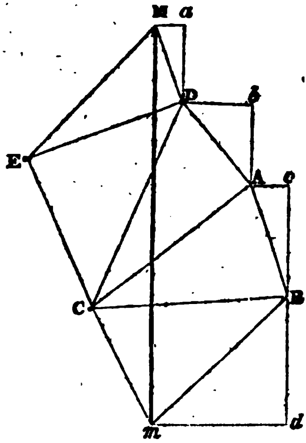
* A line is a small French measure equal to the twelfth part of an inch.

* From two Greek words, which combined, signify a dividing or apportioning of the earth.

A B C; the other angles of this triangle are observed and determined in the same manner, and the side A B, which is the base line, being known from measurement, the other two sides A C, B C, may be computed by plane trigonometry. By this means we obtain a side of each of the triangles B C *m*, A C D, and are enabled to continue the process without measuring any more sides. The angles of these triangles are measured as in the case of the first, and their sides are ascertained in like manner by trigonometry; and by proceeding in a similar way in the resolution of the whole series of triangles, the sides and angles of all are determined. The remaining step in the field proceedings is to ascertain the inclination of the lines M D and B *m*, to the meridian arc; astronomy affords the means of doing this. From the data furnished by these operations, the length of the arc M *m* is determined in the following manner:—from M and D, draw the lines M *a* perpendicular to D *a*, parallel with the meridian line, meeting each other in *a;* D *b*, A *b*, A *c*, B *c*, *m d*, B *d*, are also drawn so as to be respectively perpendicular to and parallel with the meridian. Then it is evident that the length of M *m* is equal to the sum of the lengths of *a* D, *b* A, *c* B, B *d*, which are found thus:—the inclination of M D to the meridian having been already determined by an astronomical observation, the angle D M *a* in the right-angled triangle D M *a* is known from it, and the side M D is also known, so that D *a* (which is equal to M D × sin. D M *a*) may at once be computed by trigonometrical tables. In a similar manner the sides *b* A, *c* B, *d* B are computed, and the sum of the whole gives the length of the meridian arc M *m*, and the length of a degree is the length of the whole arc divided by the number of degrees contained in it.



Picard was the first person who measured an arc of the meridian by this method. The operation was performed in the year 1670; the arc commenced near Paris, and extended northward; the result of the measurement gave, as the length of a degree in latitude 49½°, 121,627 yards, which differs only 35 yards from what is now considered as the most exact length; an accuracy which is justly supposed to be quite accidental.

Since this period arcs of meridian lines have been measured in various countries, as well in intermediate latitudes between the equator and the north pole, as near both the equator and the pole. The following table represents the length of a degree in different latitudes as determined by the five most approved measurements:—

	Latitude.			Degrees in Toises.	Degrees in Fathoms.	Country.
1	0°	0′	0″	56749	60480.2	Peru.
2	11	0	0	56755	60486.6	India.
3	45	0	0	57011	60769.4	France.
4	52	2	2	57074	60826.6	England.
5	66	20	10	57192	60952.4	Lapland.

The following particulars will show at once the accuracy which now distinguishes geodesical operations, and some of the means taken to ensure it:—

The first base in the English measurement, of which the result is given in the above table of degrees, was about five miles in length, and was measured upon Hounslow-heath with a steel chain of exquisite workmanship. The same base had been measured three years before by General Roy, with glass rods, and the two measurements (in a length of five miles) differed only 2¾ inches. The French base was measured with rods of platina, that in Lapland with rods of iron, and an allowance was made for the changes of temperature affecting the length of the rods in the course of the operation. In a previous measurement in Lapland, the French astronomers, in order to guard against the extreme contracting effect of cold upon metals, employed rods of deal; this was the more necessary in that measurement, as it was performed in the depth of winter, and the frozen surface of a river was selected for the base line, with a view to obtain as level a plain as possible. It is usual also, in order to prove the correctness of the geodesical process, to measure, towards the conclusion, what is called a base of verification. We have already stated that all the sides of the series of triangles (with the exception of the base line A B, which is a side in the first triangle) are not measured but computed: to verify all the previous steps in the process, the length of one of the sides of the triangles, as it has been deduced from computation, is compared with its length determined by actual measurement. The side of the triangle thus measured is called a base of verification, and is taken as far distant from the first base as circumstances will admit. In the French operations the base of verification was distant between four and five hundred miles from the first base, and was 7 miles in length, and yet the difference between its computed length and that obtained from its actual measurement did not amount to twelve inches.

From an inspection of the table before given, it appears that the length of a degree from the equator to the pole increases—the curvature therefore diminishes, and the earth is not a sphere but is flattened at the poles, and the polar diameter is less than the equatorial; and although the various modern measurements may not, on a comparison one with another, agree in giving to the difference of the two diameters precisely the same value, yet they all ascertain the fact of the polar diameter being less than the equatorial, and that a degree increases towards the poles; and this establishes the oblate spheroidal figure of the earth.

The value of the compression or the fraction expressing the difference between the two diameters, as deduced from a comparison of the lengths of a meridional degree in different latitudes, determined by the most approved measurements, has been lately shown by Professor Airy, in a paper in the last volume of the *Philosophical Transactions* to be $\frac{1}{278.6}$, that is, the polar diameter is less than the equatorial by the 278.6th part of the whole diameter.

Operations are now being carried on, on the continent, which have for their object the more precise determination of the fraction of ellipticity, and of the compression of the earth. The measurement of an arc of the parallel of latitude 45°, of 15° or 16° in extent has been already accomplished. One extremity of this arc is at Marennes, on the west coast of France, and a little to the north of the Garonne, and traversing France, Piedmont, and the northern parts of Italy, its other extremity is at Fiume, in the Austrian dominions, and on the eastern shores of the Adriatic. The value of the ellipticity as deduced from these operations is $\frac{1}{282.8}$. We have already stated that the pendulum experiments give $\frac{1}{288}$. This similarity in the results afforded by such very different kinds of investigation is a strong argument in favour of the general correctness of both.

The mean degree of a meridian or the degree the length of which is as much greater than that of a degree at the equator, as it is less than that of a degree at the poles, is in latitude 45°, which is the mean latitude between the equator and the poles. Its length, according to the French measurement, is 60759.4 fathoms, or 12158.8 yards. The circumference of the elliptick meridian is found by multiplying the mean degree by 360, and is equal to 24855.84 miles. The circumference of the equator is 24896.16 miles, and is not quite 41 miles longer than the elliptick meridian.

The French measurement, in 1792, was undertaken with a view to obtain a standard measure of length, to serve as the basis of a new system of weights and measures. According to this new system, the unit, or first element of linear measure, is called a metre; and the metre was declared to be equal to the ten millionth part of the quadrant of the meridian—which is a fixed and unalterable quantity in nature. The quadrant of the meridian was by this measurement found to be 5,130,740 toises, or 10,936,578 English yards: the French metre, or the ten millionth part of this quantity, would accordingly be 1.093578 yards, or 39.37 inches, nearly. This method of obtaining a standard of measure is not, perhaps, so good as that which consists in observing the length of the pendulum, which, in a certain latitude, beats seconds of mean time. For the length of this pendulum is ultimately ascertained by a reference to the equable motion of the earth upon her axis, and is, therefore, ascertainable without the aid and use of any linear measure whatever; whereas, in the very act of determining the French standard, or the quadrant of the meridian, some linear measure already in use must be employed; and thus the very basis of their new system is expressed in terms of that in the place of which it is substituted.

The importance of possessing the true length of a degree of the meridian, is not confined to investigations having for their object the determination of the figure of the earth. Upon the simple fact of the length of a degree, seemed to depend the overthrow or establishment of the theory of Universal Gravitation. The particulars connected with the discovery of a principle productive of such various effects in nature, is not the less interesting that it illustrates the secret dependency of parts of science apparently the most distinct, and the assistance which each in its place is calculated to afford the rest.

The corner-stone of the whole system of Universal Gravitation is, that the force which causes a heavy body to descend to the surface of the earth, is the same that retains the moon in her orbit, and makes her deflect from a straight line, or bend towards the earth. All that was requisite to establish the identity of the forces by which these two effects were produced, was to prove, that the quantity of effect produced in a certain time upon the moon in thus deflecting from a straight line, (taking into consideration the law by which the force varied, and *the distance of the moon*,) was in due proportion to the effect produced by the *force of gravity*, in the same time, upon a falling body at the surface of the earth. It is evident, therefore, that the determination of this question depended upon, and would in its solution be affected by, the distance of the moon from the earth. This distance being expressed only in a number of radii of the earth (about 60,) it was necessary to ascertain the length of the earth's radius. This could only be done by means of the proportion which the radius of a circle always bears to the circumference; and the length of the circumference being 360 times that of a degree, the whole matter at last resolved itself into the geodesical operation of accurately measuring a degree upon the earth's surface. The only measure, which in 1666, the time of Newton's first taking up the subject, was in existence, was that of Norwood's: this exceeded the true length of a degree by little less than 1000 yards; and as this errour would be greatly multiplied in each step of the process, it is not surprising that Newton, whether he used this measure, or the still more incorrect one of 60 miles to a degree, could not reconcile the two phenomena of the falling stone and the revolving moon, so as to refer both to the same cause—namely, the attractive force of the earth. The consequence of this errour in the then received length of a degree was, that for many years Newton laid aside his theory of universal gravitation. But in 1670, the measurement of an arc of the meridian, by Picard, took place; by mere accident the length of a degree, in latitude 49½, was then ascertained to be within 35 yards of what is now considered the true length. This new measure brought Newton back to his favourite hypothesis. He then satisfactorily proved, that the force of gravity, and the force by which the moon is retained in her orbit, are one and the same. It is related, that towards the end of the calculation, and when he perceived its probable successful issue, he became so much agitated, as to be obliged to request a friend to assist him in completing it. Thus, by the aid of the true length of a degree, was finally established the grand theory of Universal Gravitation.

(From the Philadelphian.)

SONG OF 300,000 DRUNKARDS IN THE UNITED STATES.

We come, we come with sad array,
And in procession long,
To join the army of the lost,
Three hundred thousand strong.

Our banners beck'ning on to death,
Abroad we have unrolled;
And Famine, Care, and wan Despair
Are seen upon their fold.

Ye heard what musick cheers us on,—
The mother's cry that rang
So wildly, and the babe that wailed
Above the trumpet's clang.

We've taken spoil; and blighted joys
And ruined homes are here;
We've trampled on the throbbing heart
And flouted sorrow's tear.

We come, we come—we've searched the land.
The rich and poor are ours,
Enlisted from the shrines of God,
From hovels and from towers.

And who or what shall balk the brave
That swear to drink and die?
What boots to such, man's muttered curse
Or His, that spans the sky?

Onward! though ever on our march
Hang misery's countless train;
Onward for hell—from rank to rank
Pass we the cup again!

We come—of the world's scourges, who
Like us have overthrown?
What wo had ever earth like wo
To our stern prowess known!

We come, we come to fill our graves.
On which shall shine no star;
To glut the worm that never dies,
Hurrah! hurrah! hurrah!

W. B. T.

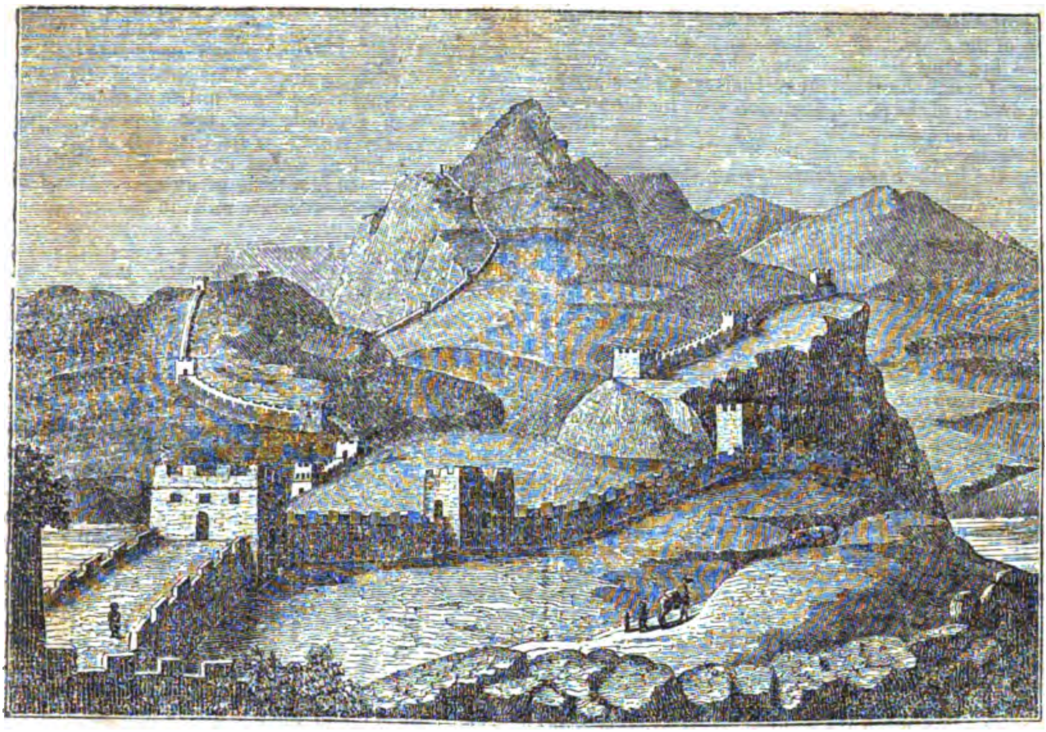
One of the enormities of Protestantism, which shocks the Papists, is the marrying of our Clergy. What is to be said of the Roman Catholick Bishop England, who, going on a foreign mission, takes out with him *four nuns*?—

The English Bishop takes one wife,
The Papist says, "O fie!"
The Roman Catholick takes out four,
And no man asks him, why?

Having shown this sprightly contribution to our Roman Catholick sub-editor, he begs leave to offer an explanation of the seeming inconsistency:—

To vindicate the Papist's life,
See how the thing is done;
The Protestant alone takes *wife*,
The Catholick takes *nun*.

Albion.



THE GREAT WALL OF CHINA.

This stupendous wall, which extends across the northern boundary of the Chinese empire, is deservedly ranked among the grandest labours of art. It is conducted over the summits of high mountains, several of which have an elevation of not less than 5225 feet, (nearly a mile,) across deep valleys, and over wide rivers, by means of arches: in many parts it is doubled or trebled, to command important passes; and at the distance of nearly every hundred yards is a tower or massive bastion. Its extent is computed at fifteen hundred miles; but in some parts, where less danger is apprehended, it is not equally strong or complete, and towards the north-west, consists merely of a strong rampart of earth. Near Koopekoo it is twenty-five feet in height, and at the top about fifteen feet thick: some of the towers, which are square, are forty-eight feet high, and about forty feet in width. The stone employed in the foundations, angles, &c. is a strong gray granite; but the materials for the greater part consist of bluish bricks, and the mortar is remarkably pure and white.

The area of the construction of this great barrier, which has been and will continue to be the wonder and admiration of ages, is considered by Sir George Staunton as having been absolutely ascertained; and he asserts that it has existed for two thousand years. In this assertion he appears to have followed Du Halde, who informs us that "this prodigious work was constructed two hundred and fifteen years before the birth of Christ, by order of the first Emperor of the family of Tsin, to protect three large provinces from the eruptions of the Tartars." However, in the History of China, contained in his first volume, he ascribes this erection to the second Emperor of the dynasty of Tsin, named Chi Hoang Ti; and the date immediately preceding the narrative of this construction is the year 137 before the birth of Christ. Hence suspicions may arise, not only concerning the epoch when this work was undertaken, but also relatively to the purity and precision of the Chinese annals in general. Mr. Bell, who resided some time in China, and whose travels are deservedly esteemed for the accuracy of their information, assures us that this wall was built somewhere about the year 1160, by one of the Emperors, to prevent the frequent incursions of the Monguls, whose numerous cavalry used to ravage the provinces, and effect their escape before an army could be assembled to oppose them.

TRIALS AND PROOFS OF GUILT IN SUPERSTITIOUS AGES.

The strange trials to which those suspected of guilt were put in the middle ages, conducted with many devout ceremonies, by the ministers of religion, were pronounced to be the *judgements of God!* The ordeal consisted of various kinds: walking blindfold amidst burning ploughshares; passing through fires; holding in the hand a red hot bar; and plunging the arm into boiling water: the popular affirmation,—'I will put my hand in the fire to confirm this,' appears to be derived from this solemn custom of our rude ancestors. Challenging the accuser to single combat, when frequently the stoutest champion was allowed to supply their place; swallowing a morsel of consecrated bread; sinking or swimming in a river for witchcraft; or stretching out the arms before the cross, till the champion soonest wearied dropped his arms, and lost his estate, which was decided by this very short chancery suit, called the *judicium crucis*. The bishop of Paris and the abbot of St. Dennis disputed about the patronage of a monastery: Pepin the short, not being able to decide on their confused claims, decreed one of these judgments of God, that of the cross. The bishop and abbot each chose a man, and both the men appeared in the chapel, where they stretched out their arms in the form of a cross. The spectators, more devout than the mob of the present day, but still the mob, were piously attentive, but *betted* however now for one man, now for the other, and critically watched the slightest motion of the arms. The bishop's man was first tired: —he let his arms fall, and ruined his patron's cause forever! Though sometimes these trials might be eluded by the artifice of the priest, numerous were the innocent victims who unquestionably suffered in these superstitious practices.

From the tenth to the twelfth century they were very common. Hildebert, bishop of Mans, being accused of high treason by our William Rufus, was preparing to undergo one of these trials; when Ives, bishop of Chartres, convinced him that they were against the canons of the constitutions of the church, and adds, that in this manner *Innocentiam defendere, est innocentiam perdere.*

An abbot of St. Aubin of Angers in 1066, having refused to present a horse to the Viscount of Tours, which the viscount claimed in right of his lordship, whenever an abbot first took possession of that abbey: the ecclesiastick offered to justify himself by the trial of the ordeal, or by duel, for which he proposed to furnish a man. The viscount at first agreed to the duel; but, reflecting that these combats, though sanctioned by the church, depended wholly on the skill or vigour of the adversary, and could therefore afford no substantial proof of the equity of his claim, he proposed to compromise the matter in a manner which strongly characterizes the times: he waived his claim, on condition that the abbot should not forget to mention in his prayers, himself, his wife, and his brothers! As the *orisons* appeared to the abbot, in comparison with the *horse*, of little or no value, he accepted the proposal.

In the tenth century the right of representation was not fixed: it was a question, whether the sons of a son ought to be reckoned among the children of the family; and succeeded equally with their uncles, if their fathers happened to die while their grandfathers survived. This point was decided by one of these combats. The champion in behalf of the right of children to represent their deceased father proved victorious. It was then established by a perpetual decree that they should henceforward share in the inheritance, together with their uncles. In the eleventh century the same mode was practised to decide respecting two rival *Liturgies!* A pair of knights, clad in complete armour, were the criticks to decide which was the authentick and true Liturgy.

If two neighbours, say the capitularies of Dagobert, dispute respecting the boundaries of their possessions, let a piece of turf of the contested land be dug up by the judge, and brought by him into the court, and the two parties shall touch it with the points of their swords, calling on God as a witness of their claims;—after this let them *combat*, and let victory decide on their rights!

In Germany, a solemn circumstance was practised in these judicial combats. In the midst of the lists, they placed a *bier*. By its side stood the accuser and the accused; one at the head and the other at the foot of the bier, and leaned there for some time in profound silence, before they began the combat.

Judicial combat appears to have been practised by the Jews. Whenever the rabbins had to decide on a dispute about property between two parties, neither of which could produce evidence to substantiate his claim, they terminated it by single combat. The rabbins were impressed by a notion that consciousness of right would give additional confidence and strength to the rightful possessor. This appears in the recent sermon of a rabbin. It may, however, be more philosophical to observe that such judicial combats were more frequently favourable to the criminal than to the innocent, because the bold wicked man is usually more ferocious and hardy than he whom he singles out as his victim, and who only wishes to preserve his own quiet enjoyments—in this case the assailant is the more terrible combatant.

In these times those who were accused of robbery were put to trial by a piece of barley-bread, on which the mass had been said; and if they could not swallow it they were declared guilty. This mode of trial was improved by adding to the *bread* a slice of *cheese;* and such were their credulity and firm dependance on Heaven in these ridiculous trials, that they were very particular in this holy *bread* and *cheese* called the *corsned.* The bread was to be of unleavened barley, and the cheese made of ewe's milk in the month of May.

Du Cange observed, that the expression—'*May this piece of bread choke me!*' comes from this custom. The anecdote of Earl Godwin's death by swallowing a piece of bread, in making this asseveration, is recorded in our history. If it be true, it was a singular misfortune.

Amongst the proofs of guilt in superstitious ages was that of the *bleeding of a corpse.* If a person was murdered, it was believed that at the touch or approach of the murderer the blood gushed out of the body, in various parts. By the side of the bier, if the slightest change was observable in the eyes, the mouth, feet, or hands of the corpse, the murderer was conjectured to be present, and many innocent spectators must have suffered death; 'for when a body is full of blood, warmed by a sudden external heat and a putrefaction coming on, some of the blood-vessels will burst, as they will all in time.' This practice was once allowed in England, and is still looked on in some of the uncivilized parts of these kingdoms as a detection of the criminal. It forms a rich picture in the imagination of our old writers; and their histories and ballads are laboured into pathos by dwelling on this phenomenon.

Robertson observes that all these absurd institutions were cherished from the superstitious of the age believing the legendary histories of those saints, who crowd and disgrace the Roman calendar. These fabulous miracles had been declared authentick by the bulls of the popes and the decrees of councils; they were greedily swallowed by the populace; and whoever believed that the Supreme Being had interposed miraculously on those trivial occasions mentioned in legends, could not but expect his intervention in matters of greater importance when solemnly referred to his decision. Besides this ingenious remark, the fact is, that these customs were a substitute for written laws which that barbarous period had not; and as no society can exist without *laws,* the ignorance of the people had recourse to these *customs,* which, bad and absurd as they were, served to close controversies which otherwise might have given birth to more destructive practices. Ordeals are in truth the rude laws of a barbarous people who have not yet obtained a written code, and not advanced enough in civilization to enter into the refined inquiries, the subtile distinctions and elaborate investigations, which a court of law demands.

May we suppose that these ordeals owe their origin to that one of Moses, called the 'Waters of Jealousy?' The Greeks likewise had ordeals, for in the Antigonus of Sophocles, the soldiers offer to prove their innocence by handling red-hot iron, and walking between fires. One cannot but smile at the whimsical ordeals of the Siamese. Among other practices to discover the justice of a cause, civil or criminal, they are particularly attached to using certain consecrated purgative pills, which they make the contending parties swallow. He who *retains* them longest gains his cause! The practice of giving Indians a consecrated grain of rice to swallow is known to discover the thief, in any company, by the contortions and dismay evident on the countenance of the real thief.

But to return to the middle ages. They were acquainted in those times with *secrets* to pass unhurt these singular trials. Voltaire mentions one for undergoing the ordeal of boiling-water. Our late travellers in the east have confirmed this statement. The Mevleheh dervises can hold red-hot iron between their teeth. Such artifices have been often publicly exhibited at Paris and London. Mr. Sharon Turner observes on the ordeals of the Anglo-Saxons, that the hand was not to be immediately inspected, and was left to the chance of a good constitution to be so far healed during three days (the time they required it to be bound up and sealed, before it was examined) as to discover those appearances when inspected, which were allowed to be satisfactory. There was likewise much preparatory training suggested by the more experienced; besides, the accused had an opportunity of *going alone into the church* and making *terms* with the *priest*. The *few spectators* were always *distant*; and cold iron, &c., might be substituted, and the fire diminished at the moment, &c.

Doubtless they possessed these secrets and mendicaments, which they had at hand, to pass through these trials in perfect security. Camerarius, in his 'Horæ Subsecivæ, gives an anecdote of these times which may serve to show their readiness. A rivalship existed between the Austin friars and the Jesuits. The father-general of the Austin friars was dining with the Jesuits; and when the table was removed, he entered into a formal discourse of the superiority of the monastick order, and charged the Jesuits in unqualified terms, with assuming the title of 'fratres,' while they held not the three vows, which other monks were obliged to consider as sacred and binding. The general of the Austin friars was very eloquent and very authoritative:—and the superiour of the Jesuits was very unlearned, but not half a fool.

He did not care to enter the list of controversy with the Austin friar, but arrested his triumph by asking him if he would see one of his friars, who pretended to be nothing more than a Jesuit, and one of the Austin friars who religiously performed the aforesaid three vows, show instantly which of them would be the readier to obey his superiours? The Austin friar consented. The Jesuit then turning to one of his brothers, the holy friar Mark, who was waiting on them, said, 'Brother Mark, our companions are cold. I command you, in virtue of the holy obedience you have sworn to me, to bring here instantly out of the kitchen fire, and in your hands, some burning coals, that they may warm themselves over your hands.' Father Mark instantly obeys, and to the astonishment of the Austin friars, brought in his hand a supply of red burning coals, and held them to whoever chose to warm himself; and at the command of his superiour returned them to the kitchen hearth. The general of the Austin friars, with the rest of his brotherhood, stood amazed; he looked wistfully on one of his monks, as if he wished to command him to do the like. But the Austin monk, who perfectly understood him, and saw this was not a time to hesitate, observed,—'Reverend father, forbear, and do not command me to tempt God! I am ready to fetch you fire in a chafing-dish, but not in my bare hands.' The triumph of the Jesuits was complete; and it is not necessary to add, that the *miracle* was noised about, and that the Austin friars could never account for it, notwithstanding their strict performance of the three vows!—*Curios. of Literature.*

CURIOUS HORNS.

Professor Cevallos relates that Paul Rodriguez, of the city of Mexico, had a horny substance growing from his upper and right side of his head, 14 inches in circumference. This divided itself into two branches, at a few inches from the root, and formed two large curved horns, with their points turned in and several inches behind the ear. From the front, and three inches from the root, another and much smaller one issued and descended over the jaw-bone laterally to the middle of the cheek; there was about an inch of space between the end of this and that of the middle excrescence of twelve inches, which was turned up and left nearly a circular space between the two horns, through which the man could easily touch his ear. The whole mass, like the horns of a ram, presented numerous knots and channels on its surface, apparently formed by successive layers. It could be easily scraped with a knife, and when burned exhaled a smell similar to any other animal substance of the kind.

In the library of the University of Edinburgh a horn is preserved which was cut from the head of Elizabeth Love. It grew three inches above the ear, and had been growing seven years.

According to Dr. C. Leigh, a woman in England, 28 years of age, had an excrescence upon her head like a wen, which continued 46 years, and then grew into two horns. After four years she cast them. and in their place grew two others. After four years she cast these also, and the horns which were on her head in 1699, were loose. Her likeness and one of her horns are in Ashmole's Museum, in London.

Aldrovandus mentions that a country boy, ten years old, had a horn growing on his head of considerable size, and that he presented himself in the hospital of Bologna in 1639 to have it sawed off.

The Journal of Trevoux for 1706, mentions the case of a girl that had a horn on the right parietal bone, and which was successfully cut off when it had attained the length of five and a half inches.

Messrs. De Thor and Bantholin have related in their respective works, that a Frenchman, named Trouillon, exhibited himself in Paris, in 1599, with a large horn on his forehead, nearly resembling that of a ram.

Mr. Scudder, founder of the American Museum, possessed a horn seven inches long, which had been taken from an old lady in New York after death. This horn had run up from the mastoid process, along the ear, and was the second growth from the root of a former one, which had previously been sawed off.

A few years since a man was seen in Philadelphia on whose breast bone a horn had grown four inches in length.

Dr. Chatard, of Baltimore, informs us that he has seen, in that city, an old woman with a horn on her nose more than an inch long, shaped like that of the rhinoceros.

About 30 years ago a heifer was exhibited for a show in London, the head and neck of which were completely imbedded in horns, and the back and limbs profusely sprinkled with them: some of the horns, and especially those about the dewlap, were as long and as large as the natural ones of the forehead, but they were much more calcarious and brittle. A limy scurf, moreover, was secreted over every part of the skin, which, whenever the skin was scratched or bitten, united with the fluid that oozed forth, and branched out into masses of small roses.

These singular formations take place in consequence of a diseased habit of particular organs, or of the system generally, which causes a large and preternatural secretion of calcarious matter.—*N. B. Times.*

NAPOLEONIDŒ.

The names of the extinct Dynasty form an Acrostick singularly predicting that all these great names should come to "nothing."

N-apoleon, Emperor of the French.
I-oseph, King of Spain.
H-ieronymus, King of Westphalia.
J-oachim, King of Naples.
L-ouis, King of Holland.

And a dissection of the compound Greek word "Napoleon," gives the following singular result:—

Napoleon, The Lion of the Wood,
apoleon, The Destroyer
poleon, of cities;
oleon, The desolating
leon, Lion
eon, now existent.

This was put together in 1813.

EXTRACT FROM A DISCOURSE ON THE HISTORY CHARACTER, AND PROSPECTS OF THE WEST.

Delivered to the Union Literary Society, of Miami University, Oxford, Ohio, at their Ninth Anniversary, September 23, 1834. By Daniel Drake, M. D.

The early history, biography, and scenery of the Valley of the Mississippi, will confer on our literature a variety of important benefits. They furnish new and stirring themes for the historian, the poet, the novelist, the dramatist, and the orator. They are equally rich in events and objects for the historical painter. As a great number of those who first threaded the lonely and silent labyrinths of our primitive woods, were men of intelligence, the story of their perils and exploits, has a dignity which does not belong to the early history of other nations. We should delight to follow their footsteps and stand upon the spot where, at night, they lighted up the fire of hickory bark to frighten off the wolf; where the rattlesnake infused his deadly poison into the foot of the rash intruders on his ancient domain; where in the deep grass, they laid prostrate and breathless, while the enemy, in Indian file, passed unconsciously on his march. We should plant willows over the spots once fertilized with their blood; and the laurel tree where they met the unequal war of death, and remained conquerors of the little field.

From the hero, we should pass to the hero's wife, the companion of his toil, and too often the victim of the dangers into which he plunged. We shall find her great according to the occasion. Contented under deprivation, and patient through that sickness of the heart, which nature inflicts on her who wanders from the home of her fathers; watchful, that her little one should not stray from the cabin door, and be lost in the dark and savage woods; wild with alarm when the night closed in, and the wanderer did not return; or frantick with terrour, when the scream of the Indian told the dreadful tale, that he had been made a captive and could no more be folded to her bosom. We shall follow her to other scenes, when the merciless foe pursued the movers' boat, or assaulted the little cabin, where in the dark and dismal night, the lone family must defend itself or perish. Here it was that she rose above her sex in active courage; and displayed in defence of her offspring more than herself, such examples of self-possession and personal bravery, as clothe her in a new robe of moral grandeur.

The exciting influences of that perilous age were not limited to man and woman; the child also felt their power, and became a young hero; the girl fearlessly crushed the head of the serpent that crossed her path, when hieing alone to the distant neighbour; and the boy, while yet too young to carry the rifle, placed the little tomahawk in his buckskin belt, and followed in the wake of the hunter; or sallied forth a young volunteer, when his father and brothers pursued the retreating savage. Even the dog, man's faithful sentinel in the wilderness, had his senses made keener, and his instinct exalted into reason, by the dangers that surrounded his playmates of the family.

Were it consistent with the object of this discourse I could introduce incidents to illustrate all that is here recounted; many might be collected from the narratives which have been published; but a much greater number lie buried in the memories of the aged pioneers and their immediate descendants, and will be lost unless they be speedily made a part of our history. As specimens of what remain unpublished, permit me to cite the following, for which I have the most respectable authorities.

A family, consisting of the husband, the wife, two children, one two years old, the other at the breast, occupied a solitary cabin in the neighbourhood of a blockhouse, where several other families resided, in the year 1789, near the little Miami river, in this state. Not long after the cabin was built the husband unfortunately died; and such was the grief and gloom of his widow, that she preferred to live alone, rather than mingle with the inhabitants of the crowded block-house, where the noise and bustle would be abhorrent to her feelings. In this solitary situation she passed several months. At night it was a common thing to see and hear the Indians around her habitation; and to secure her babes from the tomahawk, she resorted to the following precaution. Raising a puncheon of the floor, she dug a hole in the ground and prepared a bed, in which, after they had gone to sleep, she placed them side by side, and then restored the puncheon. When they awoke and required nourishment she raised it, and hushing them to sleep, returned them to their hiding place. In this way, to use her own words, she passed night after night, and week after week, with the Indians and her babes, as the sole objects of her thoughts and vigils.

Would you have an example of fortitude and maternal love, you could turn to no nation for one more touching or original.

The following incident displays the female character under an aspect a little different, and shows that in emergencies it may sometimes rise above that of the other sex.

About the year 1790, several families emigrating together into the interiour of Kentucky, encamped at the distance of a mile, from a new settlement of five cabins. Before they had laid down, and were still sitting round the blazing brush, a party of Indians approached behind the trees and fired upon them. One man was killed on the spot, and another fled to the village, leaving *behind* him a young wife and an infant child! As no danger had been apprehended, the men had not their ammunition at hand, and were so confused by the fire of the savages that it was left for one of the mothers of the party, to ascend into the wagon, where it was deposited, break open the box with an axe, hand it out, and direct the men to return the fire of the enemy. This was done, and they dispersed.

The next incident I shall narrate, was communicated to me by one of the most distinguished citizens of the state just mentioned. I shall give it to you in his own words.

"In the latter part of April, 1784, my father with his family, and five other families, set out from Louisville, in two flat-bottomed boats, for the Long Falls of Green River. The intention was to descend the Ohio river to the mouth of Green river, and ascend that river to the place of destination. At that time there were no settlements in Kentucky, within one hundred miles of the Long Falls of Green River (afterwards called Vienna.) The families were in one boat and their cattle in the other. When we had descended the river Ohio about one hundred miles, and were near the middle of it, gliding along very securely, as we thought, about ten o'clock of the night we heard a prodigious yelling, by Indians, some two or three miles below us on the northern shore. We had floated but a little distance farther down the river, when we saw a number of fires on that shore. The yelling still continued, and we concluded that they had captured a boat, which had passed us about mid-day, and were massacreing their captives. Our two boats were lashed together, and the best practicable arrangements made for defending them. The men were distributed by my father to the best advantage, in case of an attack; they were seven in number, including myself. The boats were *neared* to the Kentucky shore, with as little noise by the oars as possible. We were afraid to approach too near the Kentucky shore, lest there might be Indians on that shore also. We had not yet reached their uppermost fire (their fires were extended along the bank at intervals for half a mile or more,) and we entertained a faint hope that we might slip by unperceived. But they discovered us when we had got about mid-way of their fires, and commanded us to *come to*. We were silent, for my father had given strict orders that no one should utter any sound but that of his rifle; and not that until the Indians should come within powder-burning distance. They united in a most terrifick yell, and rushed to their canoes, and pursued us. We floated on in silence—not an oar was pulled. They approached us within less than a hundred yards, with a seeming determination to board us. Just at this moment my mother rose from her seat, collected the axes, and placed one by the side of each man, where he stood with his gun, touching him on the knee with the handle of the axe, as she leaned it up by him against the side of the boat, to let him know it was there, and retired to her seat, retaining a hatchet for herself. The Indians continued hovering on our rear, and yelling for near three miles, when, awed by the inferences which they drew from our silence, they relinquished farther pursuit. None but those who have had a practical acquaintance with Indian warfare, can form a just idea of the terrour which their hideous yelling is calculated to inspire. I was then about ten years old, and shall never forget the sensations of that night; nor can I ever cease to admire the fortitude and composure displayed by my mother on that occasion. We were saved, I have no doubt, by the judicious system of conduct and defence, which my father had prescribed to our little band. We were seven men and three boys—but nine guns in all. They were more than a hundred. My mother, in speaking of it afterwards, in her calm way said, we had made a *providential escape*, for which we ought to feel grateful."

Although but few years have elapsed since that night of deep and dismal emotion, the war-fires which blazed beneath the white limbs of the sycamore and gleamed upon the waters, have long since been superseded by the lights of the quiet and comfortable farm-house; the gliding bark canoe has been banished by the impetuous steamer; and the very shore on which the enemy raised their frightful death yell, has been washed away by the agitated waters! Nowhere in the annals of other nations, can we find such matchless contrasts between two periods but half a century apart.

In the year 1786, three brothers set out from a wooden fort, in which some families were intrenched, to hunt on Green river, in the state of Kentucky. They ascended the river in a canoe for several miles, when, finding no game, they determined on returning home. The oldest brother left the canoe, that he might hunt on his way back. As the other two slowly floated down the stream, and were at a point called the little falls, they discovered an Indian skulking towards them through the woods. He was on the same side of the river with their brother. After deliberating a moment, they decided on flight; and applying their paddles with great industry soon reached the fort, but did not relate what they had seen. In about an hour the brother arrived, and while ignorant of their discovery made the following statement:

" That has happened to me to-day, which never happened to me before. I had not met with any game, and became tired of walking, and turned in towards the river, intending to meet my brothers at the little falls, and take a seat in the canoe; but when I got near to that point, my dog sat down and howled in a low and piteous tone. I coaxed him, patted and flattered him to follow me, but he would not; and when I would approach him, he would jump up joyously and run off from towards the river, and look at me and wag his tail, and seem eager to go on. After endeavouring, in vain, to get him to follow me, I concluded to follow him, and did so. He ran briskly before me, often looking back, as if to be sure that I was coming, and to hasten my steps."

The brother was then told, that at the very point where the faithful dog had arrested his march towards the canoe, those who were in it had discovered an Indian. All who heard the story, believed that he had been perceived by the animal, and recognised as the enemy of his master; for as my respectable correspondent adds—

"The dog of the hunter was his companion and friend. They were much together, and mutually dependant upon and serviceable to each other. A hunter would much rather have lost his horse than his dog. The latter was the more useful animal to his master and greatly more beloved by him."

Nearly two years afterwards another incident occurred at the same family fort, which displays the dangers which beset the emigrants of that period, and illustrates the magnanimity of the female character.

About twenty young persons, male and female, of the fort, had united in a flax-pulling, in one of the most distant fields. In the course of the forenoon two of their mothers made them a visit, and the younger took along her child, about eighteen months old. When the whole party were near the woods, one of the young women, who had climbed over the fence, was fired upon by several Indians concealed in the bushes, who at the same time raised the usual war-whoop. She was wounded, but retreated, as did the whole party; some running with her down the lane, which happened to open near that point, and others across the field. They were hotly pursued by the enemy, who continued to yell and fire upon them. The older of the two mothers who had gone out, recollecting in her flight, that the younger, a small and feeble woman, was burdened with her child, turned back in the face of the enemy, they firing and yelling hideously, took the child from its almost exhausted mother, and ran with it to the fort, a distance of three hundred yards. During the chase she was twice shot at with rifles, when the enemy were so near that the powder burnt her, and one arrow passed through her sleeve, but she escaped uninjured. The young woman, who was wounded, almost reached the place of safety when she sunk, and her pursuer, who had the hardihood to attempt to scalp her, was killed by a bullet from the fort.

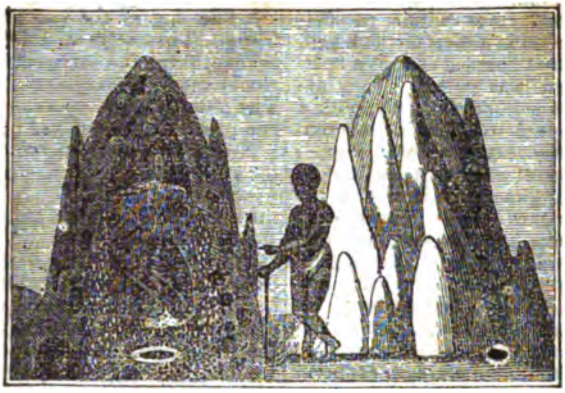
I shall not anticipate your future researches into our early history, by narrating other incidents; but commend the whole subject to your keeping, and hope to see you emulate each other in its cultivation. You will find it a rich and exhaustless field of facts and events, illustrating the emotions of fear and courage, patience and fortitude, joy and sorrow, hope, despair and revenge; disclosing the resources of civilized man, when cut off from his brethren, destitute of the comforts of life, deficient in sustenance, and encompassed around with dangers, against which he must invent the means of defence or speedily perish; finally, exhibiting the comparative activity, hardihood, and cunning, of two distinct races, the most opposite in manners and customs and arts, arrayed against each other, and, with their respective weapons of death, contending for the possession of the same wilderness.

NIAGARA FALLS.

[Written during a Thunder Storm.]

Niagara—Niagara—Careering in its might,
The fierce and free Niagara shall be my theme to night,
A glorious theme—a glorious home, Niagara are mine,
Heav'n's fire is on thy flashing wave, its thunder blends with thine
The clouds are bursting fearfully, the rocks beneath me quiver,
But thou, unscathed, art hurrying on for ever and for ever:
Years touch thee not Niagara, thou art a changeless thing—
For still the same deep roundelay the solemn waters sing;
The great, the proud of other lands, the wisest and the best,
Must speak and think of *little* things, they have not seen the *West;*
They have not seen the glorious *West*, nor in the forest dwelt,
Where nature's ever-present God is most intensely felt—
There is a chainless spirit here whose throne no eye can reach,
Awakening thoughts in human hearts, too deep for human speech.
This is the shrine, at which the heart is tutored to forget
Its former joy, its future hope, its sorrow and regret,—
For who that ever lingered here a single hour or twain,
Can think as he hath thought, or be what he hath been again,
Where'er the wanderer's foot may roam, whate'er his lot may be,
'Tis deeply written on his heart that he hath been with thee.

Detroit Courier.



TERMITES ANT HILLS.

THE TERMITES, OR WHITE ANTS.

Of these very surprising insects naturalists describe four species, the largest of which is the TERMES BELLICOSUS, OR BELLIGERENT TERMITE. The nests of these insects are large handsome pyramids; ten or twelve feet and upwards above the surface of the earth, and as many beneath it. The second species is named the FATAL TERMITE, the nests of which are likewise of a pyramidal form, but neither so lofty nor extensive as the former. Its ravages, however, are more fatal, and its punctures more painful and dangerous. The BITING TERMITE forms the third species, and constructs its nest in the form of a cylindrical turret, four feet high, and one in diameter. The turret is covered with a conical roof, which projects some inches over, and beyond the building, doubtless to prevent it from being injured by the rain. The DESTROYING TERMITE constitutes the fourth species, and constructs spherical nests round the branch of a tree, which passes entirely through them.

The TERMES BELLICOSUS, according to Mr. Smeathman, whose account has appeared in the Philosophical Transactions, constructs works which surpass those of the bees, wasps, beavers, and other animals, as much at least as those of the most polished European nations excel those of the least cultivated savages. Even with regard to man, his greatest works, the boasted pyramids, fall comparatively far short, even in size alone, of the structures raised by these insects. The labourers among them employed in this service are not a quarter of an inch in length; but the structures which they erect, rise, as has already been observed, to the height of ten or twelve feet and upwards above the surface of the earth. Supposing the height of a man to be six feet, this author calculates, that the buildings of these insects may be considered, relatively to their size, and that of a man, as being raised to nearly five times the height of the greatest of the Egyptian pyramids; that is, corresponding with considerably more than half a mile. It may be added, that, with respect to the interiour construction, and the various members and dispositions of the parts of the buildings, they appear greatly to exceed that, or any other work of human construction.

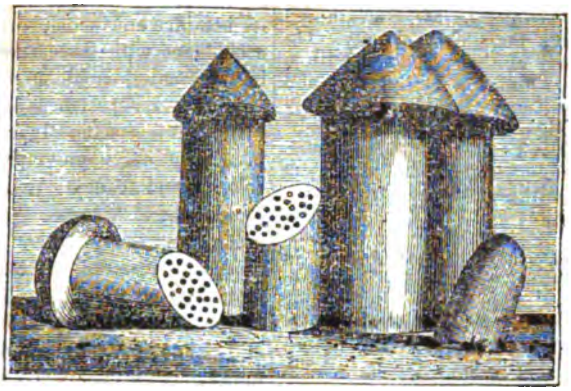
The most striking parts of these structures are, the royal apartments, the nurseries, magazines of provisions, arched chambers and galleries, with their various communications; the ranges of the gothic-shaped arches, projected, and not formed by mere excavation, some of which are two or three feet high, but which diminish rapidly, like the arches of aisles in perspectives; the various roads, sloping staircases, and bridges, consisting of one vast arch, and constructed to shorten the distance between the several parts of the building, which would otherwise communicate only by winding passages. In the plate, a section is given of one of these surprising mounds or ant *hills*; and likewise the section of a pyramid surmounted by its conical roof. In some parts near Senegal, the number, magnitude, and closeness of these structures, make them appear like the villages of the natives.

The economy of these industrious insects is equally curious with the plan and arrangement of the interiour of their buildings. There are three distinct ranks or orders among them, constituting a well regulated community. These are, first, the *labourers*, or working insects; next, the *soldiers*, or fighting order, who abstain from all labour, and are about twice as long as the former, and equal in bulk to about fifteen of them; and, lastly, the winged, or perfect insects, which may be styled the *nobility* or *gentry*, of the state; for they neither labour nor fight, being scarcely capable even of self defence. These alone are capable of being elected *kings* or *queens*; and it has been so ordained by nature, that they emigrate within a few weeks after they are elevated to this state, and either establish new kingdoms or perish in the space of one or two days.

The first order, the working insects, are most numerous, being in the proportion of one hundred to one of the soldiers. In this state they are about a quarter of an inch long, and twenty-five of them weigh about a grain, so that they are not so large as some of the ants of Europe.

The second order, or soldiers, have a very different form from the labourers, and have been by some authors supposed to be the males, and the former the neutres; but they are, in reality, the same insects as the foregoing, only that they have undergone a change of form, and approached one degree nearer to the perfect state.

The third order, or the insect in its perfect state, varies its form still more than ever, differing in every essential part from the labourers and soldiers; besides which, it is now furnished with four fine, large, brownish, transparent wings, with which it is, at the time of emigration, to wing its way in search of a new settlement. The difference is, indeed, so great, that these perfect insects have not, until recently, been supposed to belong to the same community with the others, and are not to be discovered in the nest until just before the commencement of the rainy season, when they undergo the last change, which is preparative to the formation of new colonies. They are equal in bulk to two soldiers and about thirty labourers; and, with the aid of their wings, roam about for a few hours, when their wings fall off, and they become the prey of innumerable birds, reptiles, and insects.



TERMITES PYRAMIDS.

Hence it happens, that scarcely a pair of the many millions of this unhappy race, find a place of safety, to fulfil the first law of nature, and lay the foundation of a new community. In this state many fall into the neighbouring waters, and are eaten with avidity by the Africans, who roast them in the manner of coffee, and find them delicate, nourishing, and wholesome.

The few fortunate pairs who survive this annual massacre and destruction, being casually found by some of the labourers, who are constantly running about on the surface of the ground, are elected kings and queens of new states. Those who are not so elected and preserved, certainly perish, and most probably in the course of the following day. By these industrious creatures the king and queen elect are immediately protected from their innumerable enemies, by enclosing them in a chamber of clay, where the propagation of the species soon commences. Their voluntary subjects then busy themselves in constructing wooden nurseries, or apartments solely composed of wooden materials, seemingly joined together with gums. Into these they afterwards carry the eggs produced by the queen, lodging them as fast as they can obtain them from her. Plausible reasons are given by Mr. Smeathman for the belief he entertains, that they here form a kind of garden for the cultivation of a species of microscopical mushroom; and in this belief he is supported by Mr. Conig, in his essay on the East-Indian termites, by whom also this is conjectured to be the food of the young insects. But perhaps the most wonderful, at the same time best authenticated, part of the history of these curious insects, is that which relates to the queen, or mother of the community in her pregnancy.

After impregnation, a very extraordinary change begins to take place in her person, or rather in her abdomen only. It gradually increases in bulk, and at length becomes of such an enormous size as to exceed the bulk of the rest of her body 1500 or 2000 times. She becomes 1000 times heavier than her consort, and exceeds 20,000 or 30,000 times the bulk of one of the labourers. In this state 80,000 eggs (for they have been counted) are protruded in twenty-four hours. They are instantly taken from her body by the attendants, a sufficient number of whom are constantly in waiting in the royal chambers, and adjacent galleries, and carried to the nurseries, which are sometimes four or five feet distant in a straight line. Here, after they are hatched, the young are attended and provided with every thing necessary, until they are able to shift for themselves, and take their share in the labours of the community.

Many curious and striking particulars are related of the great devastations committed by this powerful community, which construct roads, or rather covered ways, diverging in all directions from the nest, and leading to every object of plunder within their reach. Though the mischiefs they commit are very great, such is the economy of nature, that they are probably counterbalanced by the good produced by them, in quickly destroying dead trees and other substances, which would otherwise, by a tedious decay, serve only to encumber the face of the earth. Such is their alacrity and despatch in this office, that the total destruction of deserted towns is accomplished in two or three years, and their space filled by a thick wood, not the least vestige of a house remaining.

At Bombay, Mr. Forbes observes in his memoirs, they are so numerous and destructive that it is difficult to guard against their depredations: in a few hours they will demolish a large chest of books, papers, silk, or clothes, perforating them with a thousand holes: the inhabitants dare not leave a box on the floor without placing it on glass bottles, which, if kept free from dust, they cannot ascend: this is trifling, when compared with the serious mischief they sometimes occasion, penetrating the beams of a house, or destroying the timbers in a ship.

These destructive animals advance by myriads to their work, under an arched incrustation of fine sand, tempered with a moisture from their body, which renders the covert-way as hard as burnt clay, and effectually conceals them in their insidious employment.

Mr. Forbes, on his departure from his residence at Anjengo, to pass a few weeks at a country-retirement, locked up a room containing books, drawings, and a few valuables; as he took the key with him, the servant could not enter to clean the furniture: the walls of the room were white-washed, and adorned with prints and drawings, in English frames and glasses: returning home in the evening, and taking a cursory view of his cottage by candle light, he found every thing apparently in the same order as he left it; but on a nearer inspection the next morning, he observed a number of advanced works, in various directions, towards his pictures; the glasses appeared to be uncommonly dull, and the frames covered with dust: on attempting to wipe it off, he was astonished to find the glasses fixed to the wall, not suspended in frames as he left them, but completely surrounded by an incrustation cemented by the white ants, who had actually eaten up the deal frames and back-boards, and the greater part of the paper, and left the glasses upheld by the incrustation, or covered-way, which they had formed during their depredation. From the flat Dutch bottles, on which the drawers and boxes were placed, not having been wiped during his absence, the ants had ascended the bottles by means of the dust, eaten through the bottom of a chest, and made some progress in perforating the books and linen.

The different functions of the labourers and soldiers, or the civil and military establishments, in a community of white ants, are illustrated by Mr. Smeathman in an attempt to examine their nest or city. On making a breach in any part of this structure with a hoe or pickaxe, a soldier immediately appears, and walks about the breach, as if to see whether the enemy is gone, or to examine whence the attack proceeds. In a short time he is followed by two or three others, and soon afterwards by a numerous body, who rush out as fast as the breach will permit them, their numbers increasing as long as any one continues to batter the building. During this time they are in the most violent bustle and agitation; some being employed in beating with their forceps upon the building, so as to make a noise which may be heard at three or four feet distance. On ceasing to disturb them the soldiers retire, and are succeeded by the labourers, who hasten in various directions towards the breach, each with a burden of mortar in his mouth ready tempered. Though there are millions of them, they never stop or embarrass each other; and a wall gradually arises to fill up the chasm. A soldier attends every 600 or 1000 of the labourers, seemingly as a director of the works; for he never touches the mortar, either to lift or to carry it. One in particular places himself close to the wall under repair, and frequently makes the above-mentioned noise, which is constantly answered by a loud hiss from all the labourers within the dome: and at every such signal, they evidently redouble their pace, and work as fast again.

The work being completed, a renewal of the attack constantly produces the same effects. The soldiers again rush out, and then retreat, and are followed by the labourers loaded with mortar, and as active and as diligent as before. Thus the pleasure of seeing them come out to fight or work alternately, M. Smeathman observes, may be obtained as often as curiosity excites, or time permits; and it will certainly be found that the one order never attempts to fight, nor the other to work, let the emergency be ever so great. The obstinacy of the soldiers is remarkable: they fight to the very last, disputing every inch of ground so well as often to drive away the negroes, who are without shoes, and make white people bleed plentifully through their stockings.

Such is the strength of the buildings erected by these puny insects, that when they have been raised to little more than half their height, it is the constant practice of the African wild bulls to stand as centinels upon them, while the rest of the herd are ruminating below. When at their full height of ten or twelve feet, they are used by Europeans as look-out stations whence they can see over the grass, which in Africa is on an average of the height of thirteen feet. Four or five persons may stand on the top of one of these buildings to look our for a vessel the approach of which is expected.

CHYMISTRY.

In introducing Chymistry to our readers, we are adding another important department in extension of our original plan of furnishing a 'regular system of general knowledge,'—and we intend to show that if the science of Chymistry is generally the least understood, it is by no means the least important. On the contrary it may be shown, that, as a branch of general philosophy, as a school for the chymical arts, and for many of those of domestick economy, as an important auxiliary to the profession of medicine and to pharmacy, and as being connected more or less with all the various departments of human art and pursuit, by that *commune vinculum* which upholds all knowledge—Chymistry may be regarded as interesting and important, and as extensive in its bearings and benefits, as any of the sciences. In accordance with these views it is ardently cultivated in every enlightened country.

With its sister sciences natural philosophy and natural history, it is assiduously and advantageously cultivated in almost every university and medical school; in colleges and academies; in voluntary associations; in Lyceums and Athenæums; in manufacturing establishments, and every where it is sustained in popular courses of lectures. It would be disreputable to any individual who claims to have a liberal education to be unacquainted with the leading principles of Chymistry. But although the enlightened and liberal generally are found pursuing the study, yet it 'is too often supposed to imply a difficult and abstruse pursuit, and the necessity of a provision of scarce materials and expensive apparatus; and to be adapted only to those who have it in their power to devote themselves entirely to the subject: but we are of opinion that the general principles of the science may be learnt from operations which are constantly going on around us, or which we can command at pleasure; and with which it would highly benefit every one, whatever his station in life, to become acquainted. That so many persons, not uninformed in other respects, should remain heedless and ignorant of the constitution of those commonest forms of matter amongst which their lot is cast, and upon which their existence depends, shows an indifference to things of the highest interest, which is irrational, and can be accounted for only by some defect in the common systems of education. Numbers there are, far above the lower classes, who still consider the elements of all things as consisting of Earth, Air, Fire, and Water; an errour which classical learning, no less than the expressions of common parlance, tends to perpetuate. Let us hope that the days are at hand, if not already arrived, in which the acquirement of such fundamental knowledge will be looked upon as at least equally necessary with the study of languages, and the cultivation of taste and imagination.'

The science of Chymistry is exceedingly extensive. All the forms of matter existing upon this earth are capable of being submitted to chymical examination; but this class of investigations carries us even beyond the confines of this globe, and embraces the interesting subjects of light, heat and electricity. The subject is susceptible of numerous subdivisions, which might be extensively treated on separately; as Heat, Electricity, Galvanism, Thermometers, Animal and Vegetable Chymistry, Crystallography, Chymical Analysis, Metallurgy, Electro-Chymistry, Gaseous Chymistry, &c. &c. We shall confine ourselves to giving a faithful description of the phenomena of nature which it is the office of Chymistry to consider, and generally to presenting those more useful portions of the science which may seem to be of practical benefit to all who may feel disposed to give their attention to the subject.

In ancient times, every thing relating to natural bodies was included under PHYSICKS, and this term therefore, comprised NATURAL HISTORY, NATURAL PHILOSOPHY, and CHYMISTRY. Since the time of Bacon and Newton, however, the external appearances of natural bodies have been comprised under Natural History, and their analyses and composition are assigned to Chymistry. Natural Philosophy occupies itself with all that is not included in the other two great divisions of Natural science; as the mechanical laws of bodies, the physical laws of light, heat, magnetism and electricity, the phenomena of attraction and repulsion, the laws and relations of the heavenly bodies, &c.

Natural History distinguishes the characters of all natural bodies, and is subdivided into Zoology, Mineralogy, Geology, and Botany. Zoology comprehends ornithology, ichthyology, herpetology, entomology, conchology, &c. When we go as far as Natural Philosophy, and Natural History reach, then we arrive at the point where the investigations of Chymistry commence. Thus we perceive that *Natural History* *Natural Philosophy*, and *Chymistry* are all necessary to complete the scientifick history of any thing.

Natural History explains the external appearance of bodies;

Natural Philosophy the mechanical properties;

Chymistry the constitution.

We are now prepared to *define* the science. Chymistry may be defined the science which investigates the intimate nature of bodies and their mutual action on each other. Some define it, the science which treats of the combination and decomposition of bodies and of the properties which they acquire by such changes. As chymists are much confined in their operations to heat and mixture, the science has frequently been termed "the science of heat and mixture." Others define it the science, the object of which is to examine the relations that affinity establishes between bodies, ascertain with precision the nature and constitution of the compounds it produces, and determine the laws by which its action is regulated. Others term it that science which investigates the composition of all bodies, and the laws by which it is governed. The last is the modern definition, and is perhaps as correct and proper as any, inasmuch as the word chymistry is of Arabic origin, in which language it signifies "the knowledge of the composition of bodies."

Although the *science* of chymistry, considered as a collection of elementary truths derived from the study of facts, can scarcely be referred to a period much beyond the commencement of the last century, whose principal triumphs have been achieved since the middle of that period, yet some knowledge of the chymical *arts* seems to be coeval with the earliest stages of human society. Many facts were discovered and accumulated, in the practice of the arts, and in domestick economy in the early ages, but it was reserved to the period just mentioned to establish the general truths of the science, by inductive reasoning upon the phenomena. During the middle ages the world was involved in the delusions of alchymy. That study then called chymistry, was obscure and mysterious; and those misguided philosophers who dignified themselves with the name of alchymists, pursued their occult processes in cells and caverns, remote from the light of heaven, and wasted their days and nights, their talents and their fortunes in the vain pursuit of three great objects. 1. The Philosopher's stone. an imaginary substance, which they supposed possessed the power of converting the baser metals into gold and silver. 2. The Grand Catholicon, or universal remedy, which was to remove every disease; to avert death and confer terrestrial immortality upon man. 3. The Alcahest, or universal solvent, an imaginary liquid which it was supposed would dissolve all other substances, and which nothing could resist. The pursuit of these three grand objects, which occupied the chymists of the dark ages, were equally fruitless and chimerical. Their doctrine of transmutation, however, was founded on a theory as plausible as many of our own at the present day. They considered that a perfect metal consisted of *quicksilver* and *sulphur*; these when pure, formed gold. That all other metals contained a quantity of dross, which prevented the particles of these two substances from uniting. If, therefore, this dross could be expelled from the other metals, gold would be the result. They believed that nature favoured this operation. Thus Friar Bacon, in his Mirror of Alchymy, says, "I must tell you that nature alwaies intendeth and striueth to the perfection of gold, but many accidents coming between, change the mettalls," &c. It is not our design, however, to trace the progress of chymistry from age to age, nor to unfold the delusions of alchymy. Since the days of the alchymists, chymistry has undergone a total revolution; emerging from mystification and obscurity it has become a regular and beautiful science, highly subservient to the arts. In laying the foundations of the modern science, however, many valuable facts have been drawn from the discoveries of the alchymist, and employed with very essential advantage.

Chymistry is distinguished as *an art*, or a collection of facts, from chymistry as *a science*: the former is empirical, the latter is guided by established principles, and they are now, in numerous instances, happily united, in the hands of both practical and scientifick men. The chymical arts are numerous; *glass* and *soap making*, *pottery*, *metallurgy* and *dying* are among the chymical arts; so we may mention vinous fermentation, bread making, tanning, ink-making and burning lime, &c. The philosophical chymist investigates the *principles* of the chymical arts.

Ask eight persons out of ten how many elements there are, and they will answer you, *four*, viz: *earth*, *air*, *fire* and *water*. Before we show how this universally received doctrine is erroneous, we will define what is considered *an element*. *An element is an undecomposable body*—it is therefore simple, or in other words not reducible to any other form of existence. *Water*, simple as it seems, contains two elementary substances, or constituent parts, whose properties are entirely different from its own and from each other. *Fire* contains *light* as well as heat. *Air* is not simple, but contains essentially two principles, oxygen and nitrogen. *Earth*, so far from being simple, is composed of nine or ten elements. In fact we cannot say that we are certainly in possession of any one element; those which are called *real elements*, being distinguished as such, only in relation to the present state of our knowledge. We call those simple bodies which we cannot as yet exhibit in any simpler form. But earth, air, fire and water having been analyzed, we are now certain of having at the present time, instead of *four* elements, upwards of *fifty*, nearly four fifths of which are metals; the remainder are chiefly combustibles or supporters of combustion.

We have of simple bodies

1. Metals, about 40.
2. Combustibles not metallick, 7.
3. Principles or supporters of combustion 2 or 3.
4. One body, or possibly two[*] of an undetermined character: in all 50 or 51.
5. Imponderable bodies, light, heat electricity, magnetism &c.

To display further the objects of chemistry, the tendency of its study and the matters it investigates, perhaps we cannot do better by way of introduction than to present the following extract from Turner.

" Material substances are endowed with two kinds of properties, physical and chymical; and the study of the phenomena occasioned by them has given rise to two corresponding branches of knowledge, *Natural Philosophy*, and *Chymistry*.

The physical properties are either general or secondary. The general are so called because they are common to all bodies; the secondary, from being observable in some substances only. Among the general may be enumerated extension, impenetrability, mobility, extreme divisibility, gravitation, porosity, and indestructibility.

Extension is the property of occupying a certain portion of space. A substance is said to be *extended* when it possesses length, breadth, and thickness. By *impenetrability* is meant that no two portions of matter can occupy the same space at the same moment. Every thing that possesses extension and impenetrability is matter.

Matter, though susceptible of motion, has no power either to move itself, or arrest its progress when an impulse is once communicated to it. This indifference to rest or motion has been expressed by the term *vis inertiæ*, as if it depended on some specifick force resident in matter; but it may with greater propriety be regarded as a negative character, in consequence of which, matter is wholly given up to the operation of the various forces which are constantly acting upon it.

Matter is divisible to an extreme degree of minuteness. A grain of gold may be so extended by hammering that it will cover 50 square inches of surface, and contain two millions of visible points; and yet the gold which covers the silver wire, used in making gold lace, is spread over a surface twelve times as great. (Nicholson's Introduction to Natural Philosophy, vol. i.) A grain of iron, dissolved in nitro-muriatic acid, and mixed with 3137 pints of water, will be diffused through the whole mass, and by means of the ferrocyanate of potassa, which strikes a uniform blue tint, some portion of iron may be detected in every part of the liquid. This experiment proves the grain of iron to have been divided into rather more than 24 millions of parts; and if the same quantity of iron were still further diluted, its diffusion through the whole liquid might be proved by concentrating any portion of it by evaporation, and detecting the metal by its appropriate tests.

A keen controversy existed at one time concerning the divisibility of matter; some philosophers affirming it to be infinitely divisible, while others maintained an opposite opinion. Owing to the imperfection of our senses the question cannot be determined by direct experiment, because matter certainly continues to be divisible long after it has ceased to be an object of sense. The decision, if effected at all, can only be accomplished by indirect means. In favour of the former view it was urged, that to whatever degree matter is divided, it may still be conceived, in possessing extension, to be divisible into two parts; and the minuteness to which matter may actually be reduced, gave additional weight to this argument. Plausible, however, as this mode of reasoning may appear, the opposite opinion is daily becoming more general. It is now commonly believed that matter consists of ultimate particles or molecules, which are thought to be indivisible; and according to this belief have received the appellation of *atoms*. (From the privative α and τεμνω *I cut.*) The arguments adduced in favour of this opinion are derived from certain astronomical phenomena, from the laws of chymical union, and the relations which have been observed to exist between the composition and form of crystallized bodies. These subjects will be considered in their proper place; but I may observe here, in order to show the nature of the argument, that the supposed existence of atoms accounts for numerous facts, which do not admit of a satisfactory explanation on any other principle.

All bodies descend in straight lines towards the centre of the earth when left at liberty at a distance from its surface. The power which produces this effect is termed gravity, the attraction of gravitation, or terrestrial attraction; and the force required to separate a body from the surface of the earth, or prevent it from descending towards it, is called its weight. Every particle of matter is equally affected by gravity; and therefore the weight of any body will be proportionate to the number of ponderable particles which it contains.

The minute particles of which bodies consist are disposed in such a manner as to leave certain intervals or spaces between them, and this arrangement is called porosity. These interstices can sometimes be seen by the naked eye, and frequently by the aid of glasses. But were they wholly invisible, it would still be certain that they exist. All substances, even the most compact, may be diminished in bulk either by mechanical force or a reduction of temperature. It hence follows that their particles must touch each other at a very few points only, if at all; for if their contact was so perfect as to leave no interstitial spaces, then would it be impossible to diminish the dimensions of a body, because matter is incompressible and cannot yield. When therefore a body expands, the distance between its particles is increased; and, conversely, when it contracts or diminishes in size, its particles approach each other.

By *indestructibility* is meant, that, according to the present laws of nature, matter never ceases to exist. This statement seems at first view contrary to fact. Water and volatile substances are dissipated by heat, and lost; coals and wood are consumed in the fire, and disappear. But in these and all similar phenomena not a particle of matter is annihilated. The apparent destruction is owing merely to a change of form or composition; for the same material particles, after having undergone any number of such changes, may still be proved to possess the characteristick properties of matter.

The *secondary* properties of matter are opacity, transparency, softness, hardness, elasticity, colour, density, solidity, fluidity, and the like. The condition of bodies with respect to several of these properties seems dependant on the operation of two opposite forces—cohesion and repulsion. To understand how the particles of a body can attach themselves to one another and form a whole, we must suppose them endowed with a power of reciprocal attraction. This force is called cohesion, cohesive attraction, or the attraction of aggregation, in order to distinguish it from terrestrial attraction. Gravity is exerted between different masses of matter, and acts at sensible and frequently at very great distances; while cohesion exerts its influence only at insensible and infinitely small distances. It enables similar molecules to cohere, and tends to keep them in that condition. It is best exemplified by the resistance which a hard body, as iron or marble, affords to being broken by an external force.

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[*] Perhaps Silicon and Bromine. *Silliman.*

The tendency of cohesion is manifestly to bring the ultimate particles of bodies into immediate contact; and such would be the result, were it not counteracted by an opposing force, a principal of repulsion, which prevents their approximation. It is a general opinion among philosophers, supported by very strong facts, that this repulsion is owing to the agency of calorick, which is somehow attached to the elementary molecules of matter, causing them to repel one another. Material substances are therefore subject to the action of two contrary and antagonizing forces, one tending to separate their particles, the other to bring them into closer proximity. The form of bodies, as to solidity and fluidity, is determined by the relative intensity of these powers. Cohesion predominates in solids, in consequence of which their particles are prevented from moving freely on one another. The particles of a fluid, on the contrary, are far less influenced by cohesion, being free to move on each other without friction. Fluids are of two kinds, elastick fluids or aeriform substances, and inelastick fluids or liquids. Cohesion seems wholly wanting in the former; they yield readily to compression, and expand when the pressure is is removed; indeed, the space they occupy is solely determined by the force which compresses them. The latter, on the contrary, do not yield perceptibly to ordinary degrees of compression, nor does an appreciable dilatation ensue from the removal of pressure, the tendency of repulsion being counterbalanced in them by cohesion.

Matter is subject to another kind of attraction different from those yet mentioned, termed chymical attraction or affinity. Like cohesion it acts only at insensible distances, and thus differs entirely from gravity. It is distinguished from cohesion by being exerted between dissimilar particles only, while the attraction of cohesion unites similar particles. Thus, a piece of marble is an aggregate of smaller portions of marble attached to one another by cohesion, and the parts so attached are called integrant particles; each of which, however minute, is as perfect marble as the mass itself. But the integrant particles consist of two substances, lime and carbonick acid, which are different from one another as well as from marble, and are united by chymical attraction. They are the component or constituent parts of marble. The integrant particles of a body are therefore aggregated together by cohesion; the component parts are united by affinity.

The chymical properties of bodies are owing to affinity, and every chymical phenomenon is produced by the operation of this principle. Though it extends its influence over all substances, yet it affects them in very different degrees, and is subject to peculiar modifications. Of three bodies, A, B, and C, it is often found that B and C evince no affinity for one another, and therefore do not combine; that A, on the contrary, has an affinity for B and C, and can enter into a separate combination with each of them; but that A has a greater attraction for C than for B, so that if we bring C in contact with a compound of A and B, A will quit B and unite by preference with C. The union of two substances is called combination; and its result is the formation of a new body endowed with properties peculiar to itself, and different from those of its constituents. The change is frequently attended by the destruction of a previously existing compound, and in that case decomposition is said to be effected.

The operation of chymical attraction, as thus explained, obviously lays open a wide and interesting field of inquiry. One may study, for example, the affinity existing between different substances; an attempt may be made to discover the proportion in which they unite; and finally, after collecting and arranging an extensive series of insulated facts, general conclusions may be deduced from them. Hence chymistry may be defined the science, the object of which is to examine the relations that affinity establishes between bodies, ascertain with precision the nature and constitution of the compounds it produces, and determine the laws by which its action is regulated.

Material substances are divided by the chymist into simple and compound. He regards those bodies as compound which can be resolved into two or more parts, and those as simple or elementary, which contain but one kind of ponderable matter. The number of the latter amounts only to fifty-three; and of these, all the bodies in the earth, as far as our knowledge extends, are composed. The list, a few years ago, was somewhat different from what it is at present; for the acquisition of improved methods of analysis has enabled chymists to demonstrate that some substances, which were once supposed to be simple, are in reality compound; and it is probable that the same will hereafter be proved of some of those, which are at present regarded as simple.

The composition of a body may be determined in two ways, analytically or synthetically. By the first method, the elements of a compound are separated from one another, as when water is resolved by the agency of galvanism into oxygen and hydrogen; by the second, they are made to combine, as when oxygen and hydrogen unite by the electrick spark, and generate a portion of water. Each of these kinds of proof is satisfactory; but when they are conjoined,—when we first resolve a particle of water into its elements, and then reproduce it by causing them to unite, the evidence is quite irresistible.

BIOGRAPHY.

SPURZHEIM.

John Gaspar Spurzheim* was born at the village of Longvick, near Treves, in the dominions of Prussia, on the 31st of December, 1776. His parents cultivated a farm of the Abbey *St. Maximin De Treves*, and they educated him at the university of that city. They were desirous that he should enter the church; but when the French invaded Germany either from necessity or a natural predisposition, he went, at the age of twenty-three to study medicine at Vienna. There he found Dr. Gall, and after a short study, zealously embraced his new doctrines of Phrenology. He seemed to have associated himself intimately with Dr. Gall in the novel pursuit; and we find him, after having completed his medical studies, leaving Vienna in 1805 with his distinguished friend, to travel and pursue in common with him, his researches into the anatomy and physiology of the nervous system.

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* Pronounced Spoorts-hime.

Their doctrine assumed three things:

First, The dependance of mind upon the brain.

Second, That mind is made up of faculties that are independent of each other.

Third, That each of these faculties are manifested by distinct developements of brain, or that "particular mental powers are indicated by particular configurations of the head." We cannot here present the reasonings and investigations upon which the foundations of their doctrines were superinduced. But they brought to the task profound and indefatigable research, a thorough acquaintance with the anatomy and physiology of the human system, and extraordinary attainments in metaphysicks. They studied man in all circumstances and conditions, and in relation to their science, traced particular effects to their causes; and suffered no eccentricity nor remarkable individual peculiarity to escape their notice. With ample opportunities, they applied themselves with persevering industry to the accumulation of facts and the investigation of truths, which inevitably lead them on with almost certain prospects of ultimate triumph. They met with opposition, but that opposition in many instances arose from predeterminations and prejudices, which seemed not unfrequently to vanish, when the subject was investigated with candour. Gall and Spurzheim's anatomical demonstrations were sought with avidity every where, and listened to by the numerous adherents which they every where found, with admiration and applause. On the 6th of March 1805, they went to Berlin, and subsequently visited Paris and the principal cities of the Continent. They were constantly with each other, and, from 1804 to 1813, all their researches were conducted together. 'In the whole of our travels,' says Spurzheim, 'we have been well received, and the second course was always more fully attended than the first.'

The first course of publick lectures was delivered in Paris by Dr. Gall assisted by Spurzheim, in November 1807. They excited uncommon enthusiasm in Paris; and with the exception of the French Institute who did not seem to receive very favourably a memoir upon the anatomy of the brain presented by them, their doctrines were universally sought with avidity.

A work entitled, 'The Anatomy and Physiology of the Nervous System in general, and of the Brain in particular; with observations on the possibility of ascertaining the several intellectual and moral dispositions of Man and Animals, by the configuration of their Heads; four volumes, folio, with an Atlas of 100 plates,' was commenced by Gall and Spurzheim in 1809, and was continued by them, jointly, to the completion of two and a half volumes, and ultimately finished by Gall in 1819. The two authors laboured together until 1813, when they separated, from some disagreement, it is said, between them, and each pursued the subject by himself. The engravings of this magnificent work were executed under the superintendence of Spurzheim, from anatomical preparations made and determined upon by him. He was particularly careful that the plates should be correct; furnished the description of them and the anatomical details himself; and the remarks upon the abdominal thorax, the cerebral column, the five senses, the cerebellum, and upon the brain, were his. It is stated that his own discoveries were the principal object of the publication. The price of the work was 200 dollars.

In June, 1813, Spurzheim visited Vienna, and received his degree of M. D. After a few months residence there, he departed for England, and arrived at London in March, 1814. Although his fame had preceded him, the moment was not, it is said, on many accounts propitious. He created no little surprise nevertheless, at the outset, by a dissection of the brain, accompanied by a demonstration, that the viscus is composed of fibres. He did not produce in London a very general effect in his favour, although it was as extensive as might perhaps under the circumstances have been anticipated.

Leaving London he went successively to Bath, Bristol, Cork and Dublin, and it appears he was well received in all those places, and lectured with success. As it is with all new adventurers either in literature or science, who are inevitably assailed before they can get breath to make known their designs or doctrines, Gall and Spurzheim experienced a very acrimonious attack in an article which appeared in the Edinburgh Review in 1815. Spurzheim afterwards proceeded to Edinburgh, and publickly repelled the attack made upon him, and exposed the falsity and weakness of the author's reasonings. This answer of Spurzheim has been recently republished in this country, in a book form. His activity and researches were crowned with considerable success in Scotland, where he remained about a year. He returned to London in 1817, and delivered another course of lectures in that city. While in that metropolis, he became a licentiate of the Royal College of Physicians, and published in English the Physiognomical system of Gall and Spurzheim, and other works. The interest he aroused in London was not as extensive as in most other places where he had appeared. He returned to Paris in 1817. Paris seemed to have been his most favourite resort; for here the citizens seemed to appreciate his merits, and flocked with great ardour to his lectures, of which he delivered several courses. He now fixed upon Paris as his permanent abode. For a while he devoted himself to the practice of medicine, and in the character of physician, he is said to have visited many American families then in that city. His favourite pursuits however, were Phrenology, the study of philosophy, and of mankind. '*Je me propose*,' says he in a letter of Feb. 2d, 1831, '*de passer le reste ma vie, occupe de la connaissance de l'homme dans l'etat de sante et de maladie.*' And Paris indeed furnished him with every facility for the prosecution of his studies, and ample and desirable opportunities to teach his doctrines to students, who were always congregated there from every part of the civilized world. He published several volumes in Paris, and the university of that city conferred upon him the degree of M. D. in 1831.

In 1824 he married a French lady, of rare accomplishments and merit. She entered fully into her husband's pursuit, and a number of the very excellent diagrams used by him in his lectures, were the productions of her uncommonly skilful pencil. Many female Phrenological associations were indebted, for their existence, to her instrumentality.

Spurzheim lectured in London again, in March 1825, giving one course at the Crown and Anchor Tavern, and another in April at the west end of the town. The tone of publick opinion, since his last visit, seemed to have changed, and he was now greeted in the metropolis with distinguished marks of respect. His lecture-rooms were now crowded, and his audience listened in admiration of his genius, and went away satisfied with his demonstrations. During the years 1825 and 6, he wrote five or six works in the English language, and published them in London. They were well received, and many of them passed through several editions. He visited Cambridge college in 1826, where he was received with uncommon honours. In 1827 we find him in Bath and Bristol. The directors of the several literary institutions of those places declared 'that since their establishments were opened, no lecturer had attracted so numerous a class.' Again this year he lectured in London where his lectures had become unusually popular, attracting overflowing houses.

He went over to the continent again in October; and in December visited Hull, where a Phrenological society had been established. From thence he went to Edinburgh and arrived there in January, 1828. Here he found a wonderful change had taken place in favour of his doctrines, since his former visit; a society having been formed, which was conducted by a large number of learned and respectable citizens, with extraordinary spirit. This society continues to flourish, and Edinburgh, indeed, may be considered now, the strong hold of Phrenology. He lectured in Glasgow in March, and in the year 1829 in Liverpool, Manchester and other towns, where he afforded general satisfaction. His lectures were suspended during the winter of 1830, in consequence of the death of his wife.

He lectured in April 1830 before the Phrenological Society of Dublin, where many learned professors had engaged in the study of the science. Spurzheim was elected an honorary member of the Royal Irish Academy. He lectured during the remainder of that year in Belfast and Liverpool; and again in 1831 in Dublin, whence he returned to France. He continued in Paris, cultivating the science, and propagating its doctrines among the various associations, until the 20th June, 1832, when Spurzheim sailed from Havre for the United States. He arrived in New York on the 4th of August. On the 11th he proceeded to New Haven, and was present at the annual commencement of Yale College, and was much interested in the exercises. On the 16th he visited Hartford, and reached Boston on the 20th of the same month.

On the arrival of Spurzheim in the United States, he was hailed with distinguished marks of respect and attention. The curiosity of the whole union was awakened. to see a man whose fame had extended to every land where science had a temple or civilization a foothold. He commenced his first series of lectures at Boston on the 17th of September 1832, in the Masonick Temple, whither he attracted crowds. Soon after; he commenced another course at Cambridge—they occupied six evenings in a week. The Medical Faculty, and other professional gentlemen of Boston, were likewise honoured with a lecture from this distinguished advocate of Phrenology, in the afternoon of every other day. The little leisure he obtained, was devoted to the study of our Institutions, and the courtesies of friendship.

The facility with which Spurzheim discerned character, and pointed out individual distinctions, inspired confidence in the truth of his science, and the certainty of his decisions. Conscious of the favourable impression he had made, he laboured incessantly to elucidate his doctrines, and to make for them a permanent lodgement. But so constantly were his time and presence in demand, so numerous the calls from all quarters, and so desirous was he of satisfying them all, that he soon found that incessant labour was impairing his health, and in consequence was obliged to abridge his exertions. A fever, however, had already been induced; and although he continued his lectures, his animation and energy gradually relapsed, as his illness increased. He expired without a groan or struggle on the night of the 10th of October 1832.

The superiour talents, the extensive attainments, the upright, amiable and philanthropick sentiments which commanded the highest respect for Spurzheim, while living, will embalm his memory among the good, the virtuous, and the wise. The remains of Spurzheim are entombed, amid the quiet shades of Mount Auburn, and the mausoleum that marks the spot where he lies, bears the simple inscription:

SPURZHEIM.
1832.

CHINESE GOVERNMENT—PENAL CODE—PUNISHMENT—TREATMENT OF FEMALES.

When the picture of the condition of the various branches of the human family, as they exist in different portions of the globe, under different governments, enjoying different degrees of liberty and dissimilar privileges, is brought under our contemplation, we are presented with a contrast that assures us, that our affection for Republican institutions, so far from being misplaced, is in fact fixed upon objects better adapted to the wants and rights of man, and the enjoyment of happiness, than any other earthly institutions which the mind can conceive. No aristocracy, no monarchy, no despotism in the world, can present so just and admirable a scheme, so satisfactory an adaptation to the constitution of man, as the government of these United States. To appreciate fully the treasures we have in our possession, and to learn the great importance of studying to preserve them, perhaps no better plan can be adopted, than that of contrasting our own institutions and the objects they procure, with the institutions of other countries, and the condition of their citizens, or subjects, in relation to them.

China has sometimes had the reputation of having one of the wisest and best systems of government in the world. When the facts, however, are known, Chinese government sinks to as low a point as any among all known systems. It is a complete and absolute despotism. At the head stands the Emperor, in his own imagination as the son of heaven, heaven's vicegerent below; invested with unlimited power, and virtue, the sole distributer of heaven's favours on earth. He demands the adoration of his subjects, who prostrate themselves before his imperial majesty; and mandarins as well as other subjects address him as Hwang-te, "the august emperor," or Hwang-shang, "supremely august;" Ta-hwang-shang, "the great supremely august," and Shing-choo, "the holy Lord." He is also addressed as "the lord of a myriad of years;" and when spoken of as the English speak of "his majesty" the king, the Chinese use the phrase Chaou-ting, "the palace." Dressed in a robe of yellow, the colour worn, say the Chinese, by the sun, he is surrounded by all the pageantry of the highest dignity in the world; while the extensive empire lies prostrate at his feet. He pretends to be the paternal governour, but in no country in the world is tyranny so well cloaked under that endearing name. Punishments are denominated mere chastisements, even where the criminal is cut to pieces, or perishes cruelly by a slow and most ignominious death. The emperor pretends not to punish, but to correct; he is actuated by the most tender compassion, when he sucks the blood of the subject and tramples upon the laws. The law has appointed censors over his conduct, with a view of curbing, in some degree, his tremendous authority; but he receives their admonitions only when he chooses!

For the maintenance of the court, which is extremely numerous, many thousand grain junks are sent up to the capital annually, with the tribute of the respective provinces. The imperial *revenues* are enormous; but the expenses on the other hand, are equally great. The palace is said to be only a great collection of dirty buildings, in exceedingly bad repair. It is enclosed with a wall several miles in circuit. The imperial hall of audience is a very spacious apartment, upon the floor of which, every Mandarin, who enters the presence, has his place assigned. The throne is a simple but lofty alcove, devoid of ornament, bearing the inscription Shing, holy, sacred. Incense is burnt in front of it, in brazen vessels. The emperor has an extensive harem, several pleasure houses, with extensive gardens, to which he occasionally repairs. At certain seasons he pays his adoration to heaven and earth, when he goes forth with numerous officers and princes, to plough the fields. In the autumn, he sometimes engages in hunting, but otherwise seldom appears in publick.

To the utmost political power, the emperor adds also that of high priest. He accuses himself as the cause of all calamities that may afflict the country, and appeases the gods, by prescribed lamentations; thus "keeping on good terms with heaven, earth, hills, and rivers, and all the nation." A crafty, lying, base spirit is said to pervade the court and all the officers of government. A well organized system of oppression is carried on from the highest minister of state, to the pettiest mandarin; every one is most anxious to exercise his rapacity upon those below him; and those in their turn, practise the same tyranny towards their inferiours.

The most objectionable and repulsive feature in the Chinese system, is the treatment of females. Woman, who is in most other countries the peculiar object of man's love and protection, the delight and ornament of civilized society universally, in China is treated worse than a slave, and her birth is considered a matter of grief. She is taught that she "holds the lowest rank among mankind, and that employments the least honourable ought to be, and in fact are her lot." A long code, called "merits and demerits," is in use, by which every woman's conduct is determined; that code being the standard. Every action is watched, and for every good or bad deed she receives a mark of merit or demerit. At certain seasons the list is summed up, and she receives her punishment, either at the hand of a petty officer, or from her own husband or father. Her demerits might have been the slightest irregularity, or a comparatively unimportant violation of propriety or modesty. Impropriety of conduct in females in publick, is most shockingly punished.

The Chinese code of penal laws, is compiled in such a manner, as to have a punishment appropriated for every crime.

"The supreme government consists of the following departments. At the head of all the tribunals stands the Nuy-ko, or cabinet, composed of Mantchoos and Chinese, which has also a herald's officer attached to it. The Tsuhg-jin-foo, a board for the control of the imperial family, ranks very high, but has no direct influence on state affairs.

The six tribunals are:—

1. Lee-poo, the tribunal of officers, by which are selected those civilians who are invested with rank, and promoted or degraded.

2. Hoo-poo, board of revenue, which superintends the imperial treasury, territory, and population, receives and disburses, &c.

3. Le-poo, board of rites, which watches over the maintenance of decorum, and of the strict uniformity to ancient regulation, that the ne plus ultra wisdom of antiquity may not be incroached upon by innovation. This tribunal has likewise the charge of the ceremonial, where the spirits of heaven and earth, and the manes of the ancestors are invoked, in order that no object of national superstition may be defrauded of his due. With a firm hand they restrain every thing within the prescribed form; spare the people, as well as the emperor, the trouble of thinking and acting for themselves; and vigorously resist every improvement as highly dangerous. A breach of etiquette is visited with their highest displeasure; for all the rites and ceremonies having been distinctly pointed out by Confucius, it would be impiety to be wiser than the great sage. If they met with the same disobedience as similar tribunals in Europe, and possessed equal powers of mind, this board would be as severe as the Inquisition in Spain.

4. Ping-poo, the tribunal of war, superintends all military affairs, and appoints the officers of the army.

5. Hing-poo, the tribunal of punishments, is the guardian of all the law, which watches over the publick safety. In China, the numerous petty laws in force are the mere instruments of those who are intrusted with their execution. The will of the emperor is law, a mandarin's will is law; justice to the best bidder. Such is the true picture of the state of affairs.

6. Kung-poo, the board of works, which has the superintendence of all the publick buildings, fortresses, walls, dykes, &c. One might be led to think, however, that the present generation had ceased to care for their publick buildings, since every thing belonging to government is in a state dilapidation; yet this board continues to exist."*

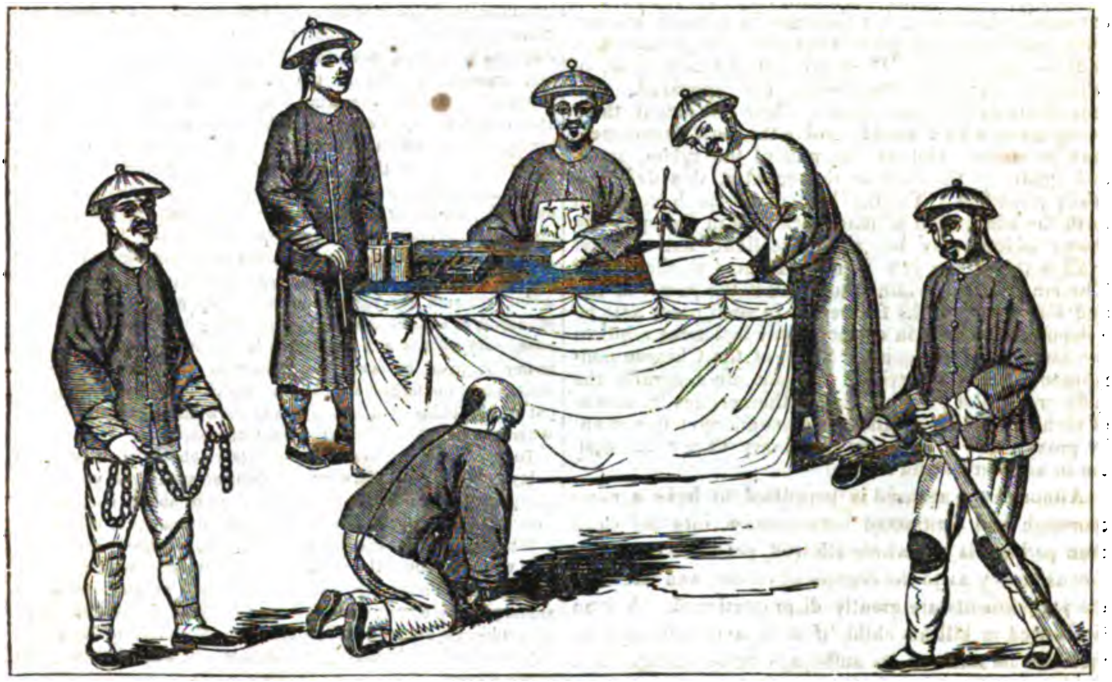
There is also a board of musick—a colonial office,—a board of "censors," a servile class, fawning when they ought to blame—a national college, where the doctrines of Confucius only are permitted to be studied—several bureaus for reviewing and despatching petitions and edicts, and an "imperial astronomical board," whose pretensions to astronomical learning are "imperially' ridiculous.

The different grades of the mandarins, are divided into nine ranks, or Pin, every one of which is again subdivided into principal and secondary. The distinguishing badge of these respective ranks are, a button or knob worn on the cap, and certain embroidery on the front and back of their state robes. Those of the first two ranks wear in their caps a red coral globe; the ornament of the third or fourth is of a light or dark blue colour; that of the fifth is of crystal; that of the sixth is of white stone; while the globes of the inferiour ranks are of gold or gilded brass.

Only the highest officers of state wear a red button, such as prime ministers, imperial guardians, cabinet ministers, &c. Viceroys of provinces, and rulers of the before mentioned boards, are invested with the second rank. In the third and fourth are included the officers in a province; in the fifth and sixth the secondary officers; in the seventh and eighth, the civilians of inferiour distinction; and, in the ninth, clerks and other petty officers.

The provinces are governed either by viceroys or lieutenants, who represent the emperor. Under them they have numerous petty officers, for the various departments.

Chinese government has one merit, at least, that of being conducted with regularity—age after age, affairs are transacted in the same regular routine, without the least deviation. The army list embraces more than a million—but the army is a mere name, but a small number ever entering active service. The navy numbers, perhaps one thousand sail—the vessels, however, are mostly mere junks, and the appearance of an American man-of-war would dissipate a whole squadron.



CHINESE CULPRIT BEFORE A MAGISTRATE.

It is the custom in China, for a Mandarin to administer justice daily, morning and evening, in his own house, where he is attended by his secretary or clerk, and by inferiour officers, some of them bearing iron shackles, and others pan-tsees. Upon his right hand stands the prosecutor, or informer, and before him is a table with a covering of silk, and the implements of writing for the secretary to take down the depositions and defence. These having been written in black ink, the magistrate signs them with red, and seals them with the same colour. On the table there are also a number of small sticks, tipped with red; these are kept in open cases, and are used in the following manner: if a culprit is convicted of a petty offence, the magistrate causes him to be immediately chastised and released. The usual punishment, upon such occasions, is the pan-tsee, or bastinado, and the number of blows to be inflicted is signified by the magistrate's casting some of the above-mentioned small sticks upon the floor: and each stick denotes five blows. The culprit, who, during the examination, has awaited the decree upon his hands and knees, is then seized by the attendants, and punished. After the magistrate has thrown the sticks, he talks of other affairs, drinks his tea, or smokes his tobacco.

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* Gutzlaff.

It is only for trivial breaches of the Chinese laws, such as drunkenness, cheating, squabbling, boxing, pilfering, indolence, or inattention towards a superiour, or the like, that any magistrate is empowered to administer punishment in a summary manner. Whenever the crime is of such a description as to call for severe notice, it is generally examined into by five or six tribunals; who not only require very particular information concerning the charge, but scrutinize, with minute exactness, into the characters and manners of the accusers.

Their proceedings in capital accusations are thus humanely protracted in China lest any man should be unjustly deprived of the inestimable benefits of honour or life: and no criminal can be executed, until his trial has been sent to court, and his sentence has been confirmed by the emperor.

"Many of the Chinese laws are very excellent, others extremely defective; but they are in general too minute, and frequently prove vexatious, and a source of endless oppression. They are reduced to a code, of which an English translation has appeared. No magistrate can execute them to their full extent, there being many which would involve the most circumspect man in crime. But as the will of the rulers, small and great, is the law of the country, this defect is easily remedied. Yet the laws of China have called forth the admiration of many scholars in Europe: the theory indeed may be called excellent, but of what avail is this if the law is not executed to the letter? The emperor has retained to himself the power of life and death, though he frequently in such cases acts by a deputy, who only in extraordinary instances requires the sanction of the court. Some of the Chinese punishments are very severe; the poor are generally the sufferers, whilst the rich expiate their crimes by means of money. It is even allowable to undergo punishment by proxy; and it is not extraordinary to see one man die in another's stead!"

Although the accused is permitted to have a more thorough and protracted investigation into his case, than perhaps is elsewhere allowed, yet there is a great inconsistency as to the degrees of crime; and likewise, the punishments are greatly disproportioned. A man is allowed to kill his child, if it be a female, and he pretends he relieved its sufferings by so doing. If a person is detected in stealing, and an offensive weapon is found upon him, he is doomed to death. But if a person robs, without carrying a destructive weapon, he is only chastised with blows. So wearing particular ornaments is a capital crime.

The various methods of punishment in China, we intend to illustrate by a series of engravings.

Vanity.—Buffon caused his own statue to be inscribed, 'A genius equal to the majesty of nature.' Would not a blade of grass have confounded his pretensions?

OURSELVES.

We do not often inflict matters of a private nature upon the patience of our readers. But it is a matter of justice, due as well to our patrons as ourselves, that we at this time understand our present as well as prospective relations with each other. We have progressed, nearly to the close of our second volume, notwithstanding we have been visited with an abundant share of buffetings and battles, and false representations. Hawked at by some, whose unfavourable predictions, we fear may have betrayed their wishes, we have occasion of self-gratulation that our march, notwithstanding, continues to be successfully *onward*. The enterprise became our own, at that inauspicious moment, when its patrons, dissatisfied with the very irregular manner in which it progressed, might have felt justified in forsaking it. Those difficulties which especially resulted from the pecuniary embarrassment of the former proprietor, the pressure of the times, &c., as well as all other barriers to complete success, have been removed. And now, however uninviting the *retrospect* may be, we feel abundantly assured that no literary wolves can hereafter

"Touch the life of our design,"

nor affect the *prospect*, that promises to procure for us all that we have hoped for, and to accomplish all that we have designed.

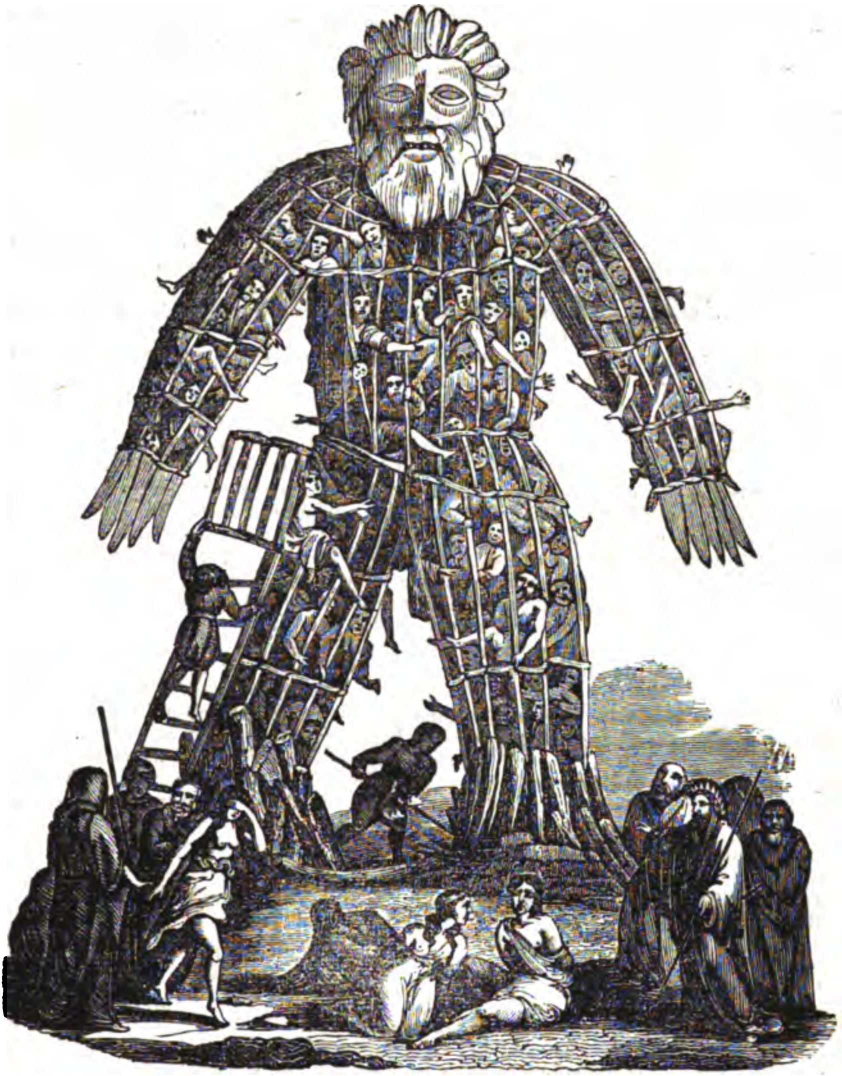
We have fairly subsisted, through nearly two volumes, and are now approaching the commencement of the third with *fairer* auspices. Our experiment has thus far proven a tolerably good one; we intend that our third volume shall show, that it is an *exceedingly* good experiment, and that we are amassing, literally a *Magazine* of knowledge, attractively and copiously embellished, that will be a desirable acquisition to every family library, and more especially to those families and individuals who have no access to books and cannot afford to purchase them. We are now, truly *in medias res;* and hereafter, the respective subjects of History, Natural History, Geography, &c. will become as we unfold them in our progress, extremely interesting and instructive. Add to the above, Astronomy, Chymistry, Biography, [illegible] an interesting compendious Miscellany; and to these, Architecture, Botany, Mechanicks, Agriculture and other branches, with which we intend to make our readers acquainted, we will put it to their understandings, whether we are not carrying *onward* a plan for the dissemination of knowledge, more desirable, and better adapted to the object, than any scheme ever devised by the projectors of periodical publications. It is not every man or every family that has a library; nor every individual that has the benefits of a liberal education; but the time is coming when, through the agency of such publications as this, the Monopoly of Knowledge will be destroyed, and the enjoyments its possession affords will be within every man's reach, and the power it gives, in every man's hands. The firesides of the artisan and the farmer will be rendered cheerful, and the humble cot of the indigent gladdened with new and cheering aspects, wherever these heralds of knowledge approach.

To give a zest to the entertainments which we shall continue to lay before our readers, we are making arrangements with some of our western friends, by which we shall be able to illustrate all that is worthy and interesting in the vast resources of the West.

We have also the satisfaction of being able to inform our readers, that we have procured a design for a frontispiece, which will be presented with the last part of the present volume, from the skilful pencil of our distinguished countryman Robt. W. Weir, Esq. The subject is original, and purely *American;* and to every subscriber who loves beautiful pictures, it will be worth half the price of the volume.

It is desirable to add, that, relying upon our own intrinsick merit, we have hired no puffers nor trumpeters to spread abroad our name, nor have we taken any trouble to vindicate ourselves when vilified and abused. The even tenour of our good humour, has only been disturbed when a few agents have troubled themselves to *fleece* us of some conveniences, known under the name of *dollars*. Those agents may have the satisfaction of knowing, that we intend to present to the world the heritage of *their fa*— as well as *names*.

SECTION XXX.



GIGANTICK DRUIDICAL IDOL.

The Druids are known for their gross superstitions, inhuman sacrifices, and abominable idolatrous rites. They inhabited Gaul and Ancient Britain. They were called *Druids* probably from the greek word δρυς, an oak, a tree for which the Druids had a most superstitious veneration. Strabo distinguishes the whole order into three classes. Bards who were the heroick, historical, and genealogical poets; Vates, who were the *religious* poets and prophets; and Druids who performed the offices of religion peculiar to the priesthood. Toland says the Druids were so prevalent in Ireland, that to this hour their ordinary word for *magician* is *Druid*; the *magick art* is called *Druidity;* and the *wand*, which was one of the badges of their profession, the *rod of Druidism*.

Among their many pernicious rites they were accustomed on great occasions to erect a huge figure of wicker work, in the rude likeness of a man, and fill it with men and women as represented in the engraving. Ordinarily those who had been condemned to death for their offences were put into it; but if these were not sufficient to fill the image, the innocent were thrust in, and then setting fire to the straw and wood, it was consumed, with all whom it contained of a pure religion. Abraham, the friend of God, enjoyed communion with his Creator; and Isaac and Jacob followed in the footsteps of the father of the faithful.

God, at the same time, raised up another ancient empire, not inferiour to China in the arts of civilized life. Egypt, a mere valley along the banks of the Nile, emerged rapidly from obscurity. Between these two empires some have discovered a very great resemblance. In both, agriculture and astronomy were highly prized, respect for superiours inculcated, parents held in honour, and a hieroglyphick mode of writing adopted. Among the Egyptians, the most degrading superstitions prevailed; while the Chinese had a political religion of mere forms. In both nations the worship of the dead obtained. Some have traced the origin of the Chinese to a colony of Egyptians; forgetting that similar causes produce similar effects, and that nations will spontaneously adopt rites and customs similar to those of other people, by the mere impulse of human nature.*

Phœnicia, another state well deserving our notice, contributed towards the civilization of the world, and ranked high among the mighty empires of Western Asia. Phœnicia united the most distant nations by the common interest of trade; and therefore greatly contributed to improve the condition of the most distant maritime countries. The Assyrian monarchy, founded by Nimrod, the great hunter, was also contemporary. In Eastern Asia we observe the greatest monotony; the most civilized part is one great mass; whilst Western Asia and Northern Africa exhibit a pleasing variety, and a multitude of states, each striving for superiority.

SHANG DYNASTY. FROM 1766 TO 1122. B. C.

As soon as Ching-tang had entered upon the duties of government, he called the princes and people together. "Kee, or Hea," he said, "has committed crimes; heaven has rejected him. The Supreme Emperour knows the heart: if you commit faults, I am responsible for them; if I transgress, I shall not forgive myself, and you are by no means responsible for my faults. Assist me in establishing peace, concord, and virtue."

None of the other emperours mention so frequently the name of Shang-te, the Supreme Emperour; nor does any one of them seem to have been penetrated by so great an awe of him as Ching-tang. However, having usurped the throne, it was requisite to give reasons for this unprecedented action; there being no higher power to appeal to than the Supreme Emperour, whose apparent sanction alone could authorize such an act. For this reason, Ching-tang constantly referred to the Judge of the universe; others, however, have done the same thing with much less justice. He commenced his reign with a solemn sacrifice, and again invoked heaven.

During his reign occurred a drought, which lasted seven years. Streams and rivers were dried up, and the whole soil was parched. People ascribed this calamity to certain demons, who grasped the clouds in their hands, and thereby prevented the falling of the rain. Notwithstanding the scantiness of the harvest, none were reduced to starvation; for Tang had so admirably regulated affairs, that there was always a quantity of grain remaining in the store-houses. He had also diminished the taxes, and encouraged the people to be zealous in the cultivation of the arid ground, the produce being entirely their own. When, however, after long waiting, no rain fell, Tang consulted with his ministers, and went out in procession to a mountain, without the pageant of monarchy. Here he entreated heaven not to punish the nation because of his offences. He freely acknowledged his transgressions, and rain descended immediately in showers. His acts of benevolence, after so signal a proof of the merciful interposition of Providence, were very numerous; the people were astonished at his unwearied benevolence, and Tang was called the well-beloved sovereign.

1753. Tae-kea, his successor, was chosen emperour by E-yin, the celebrated minister who had aided Tang in conquering the empire. At his coronation, E-yin convoked the states, and whilst praising the virtues of the illustrious ancestors of the young king, he addressed the prince in the following manner:—"The first emperours of the Hea dynasty were celebrated for their virtue; heaven did not, therefore, visit them with any calamity; their posterity degenerated, and righteous heaven, in chastisement of their crimes, transferred the empire to your family. Your majesty is the heir of the virtues of your ancestors; imitate them by being careful in promoting love between relations, and respect toward superiours. Begin to practise this in your own family, and end by promoting it throughout the four seas." Tae-kea having heard this admonition, bowed his head, and said: "I, a little child, am not well versed in the practice of virtue; I am unsettled, and cannot keep the measure; I offend heedlessly, and rush into crimes." He spoke the truth. Being prone to vice, he refused any longer to listen to the wise instructions of E-yin, who, when he saw that mere words were of no effect, took Tae-kea prisoner, and confined him in the catacombs of his ancestors. Here he was immured with his wife and concubines, and had sufficient time to bewail his errours, to repent, and to form good resolutions, having his deceased parent constantly before him. When he had duly reformed, after many years of repentance, he was restored to his throne, and died in 1721 B. C.

In the reign of Wuh-ting, the faithful E-yin died, 1713. The greatest honours were bestowed upon him, and his funeral was celebrated with all the pomp due to a sovereign. He left a disciple, Kew-tan, who was instructed in all the branches of administration, and proved worthy of so great a master. During the reigns of the emperours Tae-kang, Seaou-kea, and Yung-ke, nothing remarkable happened; but the vigour of the Shang princes greatly decayed. Tae-woo, who ascended the throne in 1637 B. C. was greatly grieved at the loss of all authority. Two trees grew up within one night, the stems increased to a considerable thickness in seven days, and in other three days decayed. Greatly astonished at such an extraordinary event, he consulted two of his ministers. E-chi, who was one of them, answered:—"Calamity may be averted by governing virtuously, and by affectionately cherishing the people." Tae-woo did not forget this lesson, and thenceforth paid no attention to omens, but contented himself with governing well. He erected hospitals, or alms-houses for the aged, where they were well provided for; prevented the mandarins from oppressing the people; and thus established his authority upon a firm basis—the love of his subjects.

During the reign of Chung-tang, extending from 1562 to 1548 B. C., the barbarians made great inroads into the empire, and were with difficulty subdued. The frequent inundations of the Yellow River compelled him to remove his capital to the province of Honan. The reigns of Wae-jin, 1534 B. C., Ho-tan-kea, 1525 B. C., Tsoo-yih, 1525 B. C., Tsoo-sin, 1506, B. C., Wuh-kea, 1490 B. C., Tsoo-ting, 1465 B. C., Nan-kang, 1433 B. C., and of Yang-kea, 1408 B. C., were so inglorious as scarcely to deserve our notice.

Pwan-kang made a desperate effort to crush the insolence of the mandarins, and to free the people from constant oppression. He removed the capital to the Yin district in Honan, and changed the name of the dynasty to Yin. The people were reluctant to remove to a new place of abode, but the sagacious remarks of the emperour greatly contributed to lead them into obedience. Seaou-sin, the successor of Pwan-kang, subverted the good institutions which his brother had introduced. He was a prince who lived entirely for his pleasure, and greatly contributed to hasten the ruin of the country. His successor, Seaou-yih, was likewise an indolent and worthless prince, who ascended the throne in 1352. But whilst the Shang family decayed, there arose another dynasty, which very soon restored the empire to its former lustre. Koo-kung, the patriarch of his family, who was a descendant of the former emperours, removed from his native country, Pin, to Ke, in shense province. His good government attracted crowds of people from all quarters to reside under so wise and lenient a ruler. Koo-kang established regular tribunals to facilitate the affairs of government; all his institutions bespeak his great wisdom; he was a prince so generally beloved that the whole empire looked up to him. Within a short time, the number of inhabitants of his new founded city amounted to 300,000.

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* See St. John's "Egypt and Mohammed Ali," vol. ii. pp. 37–132, where the character and civilization of the ancient Egyptians, as far as they can be discovered from history and their own architectural monuments, are investigated and compared with those of other ancient nations.

Woo-ting began to reign in 1324 B. C. He had a wise minister, to whom he entirely intrusted the affairs of the empire, and withdrew himself from the administration of government. When the time of mourning for his parent had expired, the officers of state requested him to resume his authority; but he refused to follow their advice, unless some sage minister were at his side to guide his counsels. Whilst his whole mind was taken up with a consciousness of his incapacity to rule, he dreamt that he saw a man capable of filling the post of prime minister. The image of this great man, whom he had seen in a dream, being deeply impressed upon his mind, he drew it, and sent some of his officers in search of this extraordinary personage. As might have been expected, it was sometime before they found him; but at last chance brought them in contact with a mason, whom they thought capable of rebuilding the state, and conducted him to the emperour, who immediately recognised him as the man he had seen in his dream. Woo-ting, struck with this marvellous event, and recognising the will of heaven in bringing to him so wise a man, addressed him, in the presence of all his ministers, in the following manner:—"I appoint you my prime minister; teach me constantly what I ought to know; be to me what a whetstone is to iron, an oar to a boat, a shower in a drought. Communicate to me the treasures which your heart contains; hide from me nothing, and never hesitate to blame me. If a medicine does not a little indispose a sick man, and cause head ache, how can a patient be restored?" Foo-yue gave his sage advice, which occupies many pages of the Shoo-king. We are rather astonished to find in a mason so thorough a knowledge of political affairs, but still more, how so long a speech could be transmitted by tradition to posterity. No doubt Confucius took great liberties in composing the history of olden times. However this may be, Foo-yue kept his word, and not only gave good advice, but succeeded also in the execution of all useful measures. During this reign the first ambassadors arrived from an unknown country, in order to do homage to the son of heaven. Under all the celebrated emperours, the adjacent barbarian states sent an annual tribute as a token of their vassalage. If they refused, they were considered as rebels, and the emperour sent an army against them. In process of time, the celestial empire extended its views, and considered all nations, though their existence were unknown, as its vassals. Hence their pretensions to tribute and subjection to their authority.

Woo-ting reigned in peace, and received after his death the honourable name of Kaou-tsung. His son, Tsoo-kang, began to reign in 1265, and was an idle and vicious prince; whose younger brother, Tsoo-kea, however, was still worse. In consequence, the Shang dynasty declined more and more in political importance. During the reign of this prince was born the celebrated Wan-wang, father of the founder of the Chow dynasty, and grandson of Koo-kung. The state increased continually in prosperity, and the people became more and more attached to the Chow family. Two worthless princes, Lin-sin, 1223 B. C., and Kang-ting, 1219 B. C., the successors of Tsoo-kea, rendered the Shang family still more despicable. Woo-yih, who ascended the throne in 1198 B. C., feared neither heaven nor man. He removed the capital to Ho-pih, in Honan. On his way thither he discovered a statue, and used his power of canonization to bestow upon it the rank of an idol. But finding that his prayers were not answered, he grew enraged, and destroyed it. Imagining that the Deity would not listen to his supplications, he discharged a great many arrows toward the azure heavens, and by suspending several vessels of blood, which were so contrived as to let the fluid out, he persuaded the people of his having hit and wounded the object of his wrath. For this impiety he was struck dead by lightning. The people in the mean while rebelled, whilst the Chow family grew more and more popular. It was under this reign that some malecontents, wearied with numerous oppressions, emigrated from China to the adjacent isles,—perhaps Japan.

Tae-ting, his successor, being anxious to reform abuses, employed the Chow family in the highest stations of government; but he himself was a weak prince. His son, Te-yih, greatly resembled his father. Wan-wang, the father of the celebrated Woo-wang, was his prime minister. To this man was confided all the cares of government, and he did not betray the high confidence reposed in him. During the reign of this prince there happened an earthquake which being felt in the territory of Chow, the people considered it an evil omen, intimating that the ruin of Shang was decreed by heaven.

Chow-sin, the last emperour of this family, ascended the throne in 1134 B. C. He was naturally of a cruel and restless disposition. Being a man of powerful mind and strong passions, he very soon excelled in all kinds of wickedness. The endeavour to put any restraint on his violent passions was without avail; and his vices were rather nourished by Tan-ke, an infamous, but beautiful woman. Every vice found in her an advocate and promoter. She imitated the shameless concubine of Kee by publickly exhibiting the most abominable scenes of debauchery. There was a garden of stags, splendidly adorned, where these orgies of lust were nightly celebrated. But her cruelty was still greater than her licentiousness. Seeing that the court and the whole family had fallen into contempt, she inveighed against the lightness of punishments; and, to remedy the evil, made an iron vessel, which, when heated red-hot, the criminal was obliged to hold in his hands till they were roasted. She also erected a brass pillar, which being greased or daubed with unctuous matter, and made slippery, was laid over a fire. Across this pillar the criminal was compelled to walk, until, after many vain efforts, he fell into the flames, which afforded the greatest delight to Tan-ke.

The emperour Chow was equally ferocious. On a cold morning, seeing several persons walking over the ice, he thought them very hardy, and ordered their legs to be cut off, that he might inspect the marrow of their bones. Wan-wang, his minister, the father of Woo-wang, remonstrating against these enormities, was thrown into prison, where he perfected the Yih-king, the symbolical book of the Chinese. His son, Woo-wang, greatly dejected at the sufferings inflicted on his father, sent a beautiful female to the tyrant, who, captivating him with her charms, procured the liberty of the minister. When several governours had taken up arms to rid themselves of such a monster, Wan-wang opposed their design, and re-established the peace of the empire. Having arrived at a very old age, he called to him Sepih-Fa, his son (afterwards Woo-wang,) and said: "I am about to die; remember the last words of your father; there are three things which I wish to recommend to you. When there is an opportunity for doing well, do not postpone it; be anxious to correct your own faults, and be indulgent toward others; when there is occasion for acting, act:—this is the foundation of virtue." Wan-wang is greatly celebrated in the classical odes of China, where his wisdom is highly extolled and recommended. There is still a picture of his observatory extant.

The grandees in Honan province very soon revolted. Woo-wang marched against them; but instead of finding them hostile, they earnestly besought him to free the people from such a worthless prince. Woo-wang now began, though with some hesitation, to yield to their wishes. The rumour of a general defection spread rapidly. Tsoo-e, a faithful adherent, admonished the emperour to oppose the rebellion; Chow laughed at the idea of being terrified by vain reports. Pe-kan, Chow's faithful minister, frankly reproved the prince for his lethargy; Chow did not forget it. "I have heard," he said, "that a sage's heart has seven apertures; Pe-kan considers himself a sage;" and he had the heart of Pe-kan immediately torn out, in order to inspect it. As Ke-tsze, another minister, did not approve of this cruel treatment of his colleague, he was degraded to the rank of a slave, and confined in a close prison, where he feigned madness.

Woo-wang's patience was finally exhausted. He offered a great sacrifice to Shang-te, invoked heaven as a witness of the justice of their cause, and became the leader of the rebellious nobles, who were already in arms, 1122 B. C. The speeches he delivered on this occasion are given at full length in the Shoo-king. By these the courage of his soldiers being raised to the highest pitch, they all joined expressing their wish to second Woo-wang in overthrowing the tyrant. At the dawn of day the two armies came in sight of each other at Muh-yay; for Chow, when he finally learnt that Woo-wang was in earnest, had brought together an innumerable army, whose spears appeared like a forest of trees. Woo-wang, with a steady pace, made the attack; the imperial troops were thrown into disorder, one regiment pressing upon another, till a general confusion ensued, in which so many were slain, according to the Shoo-king, that the blood flowed like rivulets. Chow-sin, thinking every thing lost, fled into the palace, and after having adorned himself, like another Sardanapalus, with precious stones, set the whole pile on fire. His son, Woo-kang, went forth to meet Woo-wang, riding chained in a cart with a coffin at his side. The conqueror received him kindly, freed him from his chains, and burnt the coffin. Tan-ke, fearing for her life, put on her best ornaments and proceeded towards the enemy, in the hope of enchanting the victor by her charms. On the way she was met by the soldiers of Woo-wang, who had been sent to extinguish the fire in the palace. The officers arrested and chained her, and she was executed, according to Woo-wang's orders, as the cause of all the evils inflicted on the empire.—*Gutzlaff's Sketches.*

PUNCTUALITY.—A committee of eight gentlemen had appointed to meet at 12 o'clock. Seven of them were punctual: but the eighth came bustling in with apologies for being a quarter of an hour behind the time. "The time," said he "passed away without my being aware of it. I had no idea of its being so late," &c. A Quaker present said, "Friend I am not sure that we should admit thy apology. It were matter of regret that thou shouldst have wasted thine own quarter of an hour; but there are seven besides thyself, whose time thou hast also consumed, amounting in the whole to two hours, and one eighth of it only was *thine own property.*

NATURAL HISTORY.

Mammalia. Order Carnivora.

THE RATEL.

Ratelus Mellivorus.

The dentition of the Ratel is so contradictory to the singular habits attributed to it by Sparrman and all subsequent travellers to the Cape of Good Hope, that we are compelled to doubt the perfect accuracy of the common report on which their statements appear to have been founded, or at least to admit that there is still much to be learned before its history can be regarded as complete. It requires indeed the most positive evidence to convince us that an animal, the number and disposition of whose teeth correspond more closely with those of the cat than any other quadruped with which we are acquainted, and exhibit a carnivorous character scarcely, if at all, inferiour to that which is evidenced by the same organs in the hyænas, should subsist entirely, as from these accounts we are left to believe, upon the petty rapine of a hive of bees and the honied produce of their comb. Still there exist such decisive marks of a diminished capacity for preying on animal food in the thick-set and clumsy form of its body, the shortness of its limbs, its partially plantigrade walk, the structure of its claws, the elongation of its muzzle, and even in the form of the teeth themselves, as to induce us to pause before we determine to reject the popular testimony as unworthy of credit, although we must regard it as doubtful on some particular points, and insufficient and imperfect on the whole.

The teeth of this curious animal, according to M. F. Cuvier's figures and description, confirmed by our own observations on two specimens preserved in the Society's Museum, and as far as possible on the living animal, consist of the six incisors common to nearly all carnivorous quadrupeds, two canines, and eight cheek teeth in each jaw. The incisors have little to distinguish them from those of the neighbouring groups. The canines are remarkably thick and strong, especially in the lower jaw, and are somewhat triangular in their general outline. In the upper jaw the cheek-teeth are composed of two false molars with conical and pointed crowns, one lacerator, and one tubercular, arranged exactly in the same manner as in the cat. The lacerator, however, presents a much greater extent of surface than in those animals, and the tubercular tooth placed within its posteriour angle expands into a flattened crown of considerable size. In the lower jaw there are three false molars anteriour to the broad and powerful lacerator, and no tubercular tooth behind it. These characters are so peculiar that it is no longer possible, with any regard to systematick consistency, to confound the animal to which they belong, either with the civets, with which it was associated by Sparrman, and after him by the generality of writers on zoology, or with the gluttons, by the side of which Baron Cuvier has proposed to place it. It must of necessity form the type of a new genus, which may be further characterized by its thick, heavy, depressed body; its short stout legs, with five toes upon each foot, each of the toes surmounted by slightly arched unretractile claws, grooved along their under surface, and much longer on the anteriour than on the posteriour feet; its total want of external ears, their place being supplied by a slightly elevated margin surrounding an auditory opening of moderate size; the prolongation of its snout, which terminates in a soft and naked muzzle; and the roughness of its tongue, which resembles that of the cat in the sharpness, elevation, and backward direction of its horny papillæ.

In size the Ratel is about equal to the Badger, to which it also bears a distant resemblance in form. The whole of the upper surface of its body, which is singularly broad and flat, comprehending the top of the head and neck, the entire plane of the back, and the root of the tail, is of a dull ash-gray, whiter towards the head, and strongly contrasting with the under parts, including also the muzzle, the contour of the eyes and of the ears, the limbs, and the remainder of the tail, which are throughout perfectly black. The only visible difference which we have been able to detect between the Asiatic and African animals consists in this, that the latter is described as possessing a stripe of lighter gray, about an inch in breadth, passing from behind the ears along each side, and forming the boundary of the two colours, which is entirely wanting in our specimen, and in the figure of the Indian variety given by General Hardwicke.

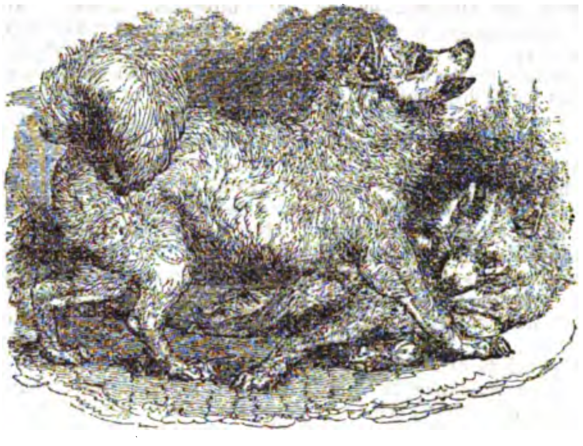
The hair all over the body, although tolerably smooth, is remarkably stiff and wiry; and the hide beneath it is excessively tough, and so loose that Sparrman's statement is scarcely to be regarded as an exaggeration, when he assures us that if "any body catches hold of him by the hind part of his neck, he is able to turn round, as it were, in his skin, and bite the arm of the person that seizes him." The claws on the fore feet are extremely long, and although not very strongly curved, of considerable power, being formed especially for digging up the earth; an operation which all the accounts of the animal's manners concur in stating that it performs with great dexterity. Of these claws the middle three are much longer than the lateral, and the internal one is placed far behind the others. On the hind feet the claws, also five in number, are of nearly equal length, but are much shorter, and proportionally much less powerful, than those of the anteriour members. The total length of the animal is about three feet, of which its tail forms a little more than a sixth. Its height does not exceed ten or twelve inches, and the length of its fore claws, when not worn down by constant use, is about an inch and a half.

With respect to the habits of these animals we shall first give an abstract of Sparrman's version of the relations of the Hottentots and of the Dutch Colonists, which has been adopted by all subsequent writers. The bees, according to our author, furnish the Ratel with his principal, if not his only, means of subsistence. These insects are accustomed to take up their abode in holes in the earth formed by various burrowing quadrupeds; and the Ratel is endowed with peculiar sagacity for discovering their nests, which it undermines with its powerful claws, in order to feast upon the honey contained in them. Aware that sunset is the period at which the bees return to their homes, it chooses that time for making its observations, which are conducted in a very curious manner. Seated upon the ground with one of its paws raised so as to shade from its eyes the rays of the declining sun, it, peers cautiously on either side of this singular kind of parasol, until it perceives a number of bees flying in the same direction. These it carefully marks, and follows in their track until it has safely lodged them in their nest, which it immediately commences pillaging. But if it should happen that, contrary to their usual custom, they have built in the hollow of a tree, the Ratel being unable to climb, and angry at its disappointment, wreaks its vengeance upon the senseless stock by biting around it; and the Hottentots know well that such marks on the trunk of a tree are certain indications of a bees' nest being contained within it.

It is added that the Ratel, as well as the native inhabitants of the neighbourhood of the Cape, is sometimes guided in this search after honey by a little bird, the Cuculus Indicator, or Honey-Cuckoo, which it seems has sagacity enough to know that both men and beasts are fond of the tempting spoil. This little creature, although incapable of storming a hive in its own person, takes advantage of the propensity which exists in others who are better fitted for the task, and invites the Hottentot or the Ratel to follow it by a peculiar note, which they both equally understand. Having thus secured their attention, it flies slowly on before them, alternately halting for them to come up with it, and then taking another flight, still admonishing them by its warning voice, until it arrives at the spot where the hidden treasure is deposited. There it suddenly ceases to be heard; but remains quietly perched on a tree in the vicinity, waiting for a share of the plunder which it usually receives as a reward for its interested service.

In such an attack upon an angry swarm the toughness of the Ratel's hide must be a most effectual defence; and it is even stated that so difficult is it to penetrate its skin that a pack of dogs, which would be sufficient to despatch a moderate sized lion, have sometimes failed in their attack upon so comparatively insignificant an animal. Such is its tenacity of life that Mr. Barrow states that "it is a species of amusement for the farmers to run knives through different parts of its body, without being able for a length of time to deprive it of existence." Major Denham was, however, informed by the natives of Central Africa, where it is also found, that a single blow on the nose is sufficient to destroy it almost instantaneously: which may probably be owing to the thinness of the skull adjoining the ossa nasi. In the same regions it has obtained credit for so much ferocity, as to be said, at certain seasons, to venture singly to attack a man.

Very different from Sparrman's account is that given by General Hardwicke, whose testimony is so fully confirmed by the structure of the animal that its authenticity may be considered as beyond a doubt. The General states that it is found in several parts of India, in the high banks bordering the Ganges and the Jumna, from which it rarely issues by day, but prowls at night around the habitations of the Mahommedan natives, scratching up the recently buried bodies of the dead, unless their graves are protected by thorny bushes placed over them for the purpose. It burrows with such celerity that it will work itself under cover in the hardest ground in the space of ten minutes. The natives sometimes dig them out of their holes and take them alive; the old ones, however, are with difficulty secured, and seldom live long in captivity. The young, on the contrary, are very manageable, docile, and playful. Their general food is flesh in any state, but birds and living rats appear to be peculiarly acceptable. They are fond of climbing, but perform this operation in a clumsy manner; although they will ramble securely along every arm of a branching tree, provided it is sufficiently strong to bear their weight. They sleep much during the day, but become watchful at night, and manifest their uneasiness by a hoarse call or bark proceeding from their throat.



THE ESQUIMAUX DOG.

Canis familiaris. Var. borealis.

In placing the Esquimaux Dog by the side of the Hare-Indian, we have been guided not so much by the degree of affinity subsisting between them, as by a desire to afford an opportunity for comparing, or, if the reader so please, for contrasting these two remarkable varieties of the canine species, the faithful companions of two races of mankind as distinct as the dogs themselves, and alike inhabitants of the same dreary climate, dependent on the same precarious means of subsistence, and sharers in the same toils, the same privations, and the same pursuits. This object will be sufficiently answered by the figure above given, and by a brief description of the specimen from which it was taken. For a more particular account of the qualities of his race we need hardly refer to the narratives of the various northern expeditions which have for the last twelve years attracted so much of the publick attention. In all of these the Esquimaux Dog forms so prominent a feature, as the patient and enduring friend, the bold, active, and experienced hunter, the laborious beast of burden, in a word the indispensable assistant of his master under all circumstances and in every emergency, that it is impossible to have read them without retaining a strong impression of the value of the services which he performs for the rude tribes who owe every thing to his docility and to his skill.

Our specimen is of a dingy white with a tinge of yellow on the upper parts, which gradually fades away upon the sides, and exhibits no appearance of the black markings so commonly seen in this variety. Its size is that of an English mastiff; its make robust and well proportioned; with a short but regularly diminishing muzzle; upright and pointed ears; strong and thick-set legs; and a long bushy tail covered with broadly diverging hairs and constantly curled upwards over the back. It was brought to England by Lieutenant Henderson, one of the companions of Captain Ross, and is as quiet and good tempered as it is possible for a dog to be. The Hare-Indian in our next.

MATHEMATICAL GEOGRAPHY.

OF TERRESTRIAL GLOBES.

Having investigated the leading and most useful branches of Mathematical Geography, we will conclude that part of the subject with some remarks upon the construction and principal uses of globes and Geographical Maps.

To fix well in the mind the different parts of knowledge which form the study of geography, it is necessary to have before our eyes an image of the earth and its parts, on a small scale. The most simple of these representations is the *artificial terrestrial globe;* it is the earth in relief, with its seas, continents, and islands. The mountains, rivers, and principal towns, are also indicated on it. All these points have on the artificial globe their *true position;* they are represented in their totality and relatively to each other, as they are situate on the earth itself, according to astronomical observations and geodesick measures.

On the surface of the globe, ought to be indicated the terrestrial equator, the tropicks, the polar circles; then, by weaker lines, the other parallels to the equator, from 5 to 5, or from 10 to 10 degrees, according to the size of the globe. We also find the meridians indicated from 5 to 5, or from 10 to 10; they are numbered at their point of intersection with the equator. The parallels to the equator are also numbered at the place where they cut that meridian which has been chosen for the first. The ecliptick is also marked on good globes.

The poles are indicated by two points, on the axis of which the globe turns. These two points are fixed to a circle of metal which surrounds the globe from one pole to the other, so that on turning the globe, every terrestrial spot passes under this circle. It serves, therefore, as a *general meridian,* and is so called. The degrees of latitude, and even, on large globes, the minutes and seconds, are marked on the general meridian.

The bearers, or feet of the whole machine, support a circular band of metal, or wood; it cuts the globe, in whatever position it may be placed, into two hemispheres, one superiour, the other inferiour; and thus represents the rational *horizon.* This artificial horizon has several circles traced on its surface; the inmost marks the number of degrees of the twelve signs of the zodiack; on it are the names of those signs and the days of the month. Another circle is divided into thirty-two parts, which mark the points of the compass.

The quadrant for taking heights is intended as a substitute for the compass in different researches. It is a little plate of copper attached to the general meridian, and divided into 90 degrees, which serves to measure the distance and position of places without the compass. The *horary circle* is fixed on the north pole; it is divided into 24 hours, and bears a moveable needle, which turns round the axis of the globe. There is also at the foot of the globe a *compass*, which should be fixed in the parallel and meridian of the horizon. With the term *meridian*, which is indicated on the globe by the circle of metal passing through the poles; the circles of *latitude* running parallel to the equator, and the circles of *longitude* that cut the equator perpendicularly, and are all represented by lines drawn on the surface of the globe, we have perhaps already made the reader sufficiently acquainted. Caution, however it may be remarked should be exercised in calculating degrees of longitude on different globes, inasmuch as almost every nation assumes a different *first meridian.* Ptolemy fixed his first meridian at the Fortunate Isles (now Canaries,) Louis XIII. ordered that the first meridian should be placed at the Isle of Ferro, the most western of the Canaries; the Dutch fixed upon the Peak of Teneriffe; and Gerard Mercator, a famous geographer of the 16th century fixed upon the island Del Corvo, one of the Azores. The French mariners count from the meridian of the observatory of Paris; the English from Greenwich; the Spaniards from Cadiz; the Americans from Washington. Navigators also count longitude differently from geographers. According to the custom of geographers, the longitudes begin to be counted from the eastern side of the first meridian, and are reckoned in the same direction over the whole circumference of the equator, till they return to the western side of the meridian. In this way of counting the longitudes may rise to 360°. Mariners estimate the longitude from the difference of time which elapses between the passage of the meridians through the same heavenly body, or from the difference of hours counted at the same moment in two different places. If one has advanced towards the east, one counts more than under the meridian from which one set out; the contrary happens when one advances towards the west. In this way of counting, the longitude is always marked by the side nearest the first meridian, so that the longitudes only embrace the semicircumference, or do not rise beyond 180°, and the globe is divided into two hemispheres with respect to the first meridian; in the hemisphere situated to the west, the longitudes have the denomination of *occidental;* and in the other *oriental.* All marine charts are established according to this system of numeration.

These diversities in the manner of estimating the longitude necessitate calculations of reduction. We are obliged, before using a map, to examine what is the meridian adopted by the geographer, "which often embarrasses even learned persons."*

When we have to do with longitudes reckoned according to the method of geographers, that is, by making the entire tour of the globe by the east, we must take the difference of longitude of the two meridians to be compared; and if the meridian from which we wish to set out is to the west of the other, this difference must be added to all the longitudes counted from the other; in the contrary case it must be retrenched. We will illustrate this by an example: Moscow is 35° 12′ 45″ from the meridian of Paris, how many is it from that of Greenwich? Add the difference, which is 2° 20′ 15″, and you will have the result 37° 33′. Here is another: Paris is 20° from the meridian of the Isle of Ferro, how many is it from the Dutch meridian of Teneriffe? This meridian being a degree more to the east than the other, retrench 1° from the given longitude, and you will have 19°.

The reduction of longitudes, reckoned according to the practice of navigators, is much more in use. In setting out from the same meridian, all the oriental marine longitudes, as far as 180°, remain the same as in the manner of reckoning adopted by geographers. With respect to the occidental marine longitudes, it is sufficient to deduct them from 360°, to bring them to the numeration of geographers. Here is an example: Venus's Point, in the island of Otaheite, has been determined by navigators to be 151° 50′ 30″ of western longitude from the meridian of Paris. If from 360° we take off 151° 50′ 30″, the difference, which is 208° 9′ 30″, will be the longitude according to geographers. By an inverse operation, we may transform into nautical longitude the geographical longitudes above 180°, by deducting them from 360°.

The first use that is made of the globe is to determine the distance from one place to another. The shortest distance of two points on the sphere, is measured by the arc of the great circle which joins them; and as all great circles are equal, the degrees of any one of them contain the same number of itinerary measures as those of the meridian. We take therefore with a compass the opening of the arc comprised between the points proposed, and carry it to the meridian or the equator, which are graduated.

We have mentioned what is to be understood by *North* and *South*, *East* and *West;* it is by studying the globe attentively that we come to understand perfectly the value of those terms. Two terrestrial points, situated under the same meridian, are directly north and south of each other, and all the intermediate points, that is to say, all the points of the line of distance, are equally north and south of each other, and all reciprocally on the same point of the compass. In like manner any two points whatever, taken under the terrestrial equator, are directly east and west of each other, and all the intermediate points are equally so, and are reciprocally on the same point of the compass.

It may not be amiss, to mention the singular fact, that if a vessel is directed constantly towards the same point of the compass, that point not being one of the four cardinal points, it will describe on the globe *a curve, which does not return into itself, but which is indefinitely prolonged in a spiral manner, always approaching the pole, without ever reaching it. It may be asked, why, going constantly on the point east to reach a place really situated to the east of another, (by the shortest route,) one never gets there, but, on the contrary, always gets the farther from it?* The reason is, that by always following the same point of the compass out of the equator, and changing the meridian, we do not describe the arc of the great circle which measures the distance of the two places, but a spiral or loxodromick curve, which will never pass by the spot required. The experiment may be tried upon the globe.

There are two points on the globe where there is neither *east* nor *west;* these are the two poles. The globe may also be considered with respect to the extent of its surface, which is 16,501 200 square marine leagues, supposing the earth a sphere. If we wish to know the extent of any zone whatever contained between two parallel circles, geometry teaches us, that the surface of a spherical zone is to the area of the sphere as the distance of the parallels which bound it is to the diameter. It is not our design however to enter into the calculation; but a German geometer has calculated from these principles, *tables of the square surface of the zones*, by which may be easily obtained the area of the surface of any given district of country.

To find on the artificial globe the latitude of any terrestrial place, the globe must be made to turn round its immoveable axis till the fixed meridian be brought on that place; and the degree marked on the meridian at that point will give the latitude of the place. The longitude of the same place will then be found, on the equator, at the point where this circle passes under the meridian.

The dial, which is commonly adapted to the north pole of the globe, serves to show the hour in one part of the earth when it is noon in another; for, by placing the latter under the meridian, after having fixed at noon the needle of the dial, and making the globe turn till the meridian is on the place, the hour of which is required, the needle will indicate on the dial the hour.

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*D'Alembert.

work of Aristotle on astronomy is lost; and what is still more to be regretted, that of his disciple Eudemus on the history of astronomy. The poem on the Sphere attributed to Empedocles, B.C. 450, is probably much more modern.

We now come to the period of history, and of the Alexandrian school. This article being for reference only we shall condense as much as possible the principal discoveries of the succeeding astronomers, in order of time. This could not be done in the chain of surmises mixed with history which we have just finished, since it is important to avoid confounding what is known with what is only supposed.

Autolycus, B. C. 300. His books are the earliest which are extant in the Greek language on astronomy. They are two—1. On the sphere in motion. 2. On the rising and setting of the stars. He appears to have considered the year as exactly 365 days.

Euclid of Alexandria, B. C. 300. The Elements of Euclid show that the Greeks of his time had no trigonometry. There is another work attributed to him, entitled *Phenomena*, which is no more than a treatise on the doctrine of the sphere.

Aratus of Cilicia, B. C. 281, has left an astronomical poem, chiefly taken from Eudoxus, and valuable on account of the commentary of Hipparchus.

Aristarchus of Samos, B. C. 280. His work on the magnitudes and distances of the sun and moon is the first attempt to measure the relative distances of these two bodies, by observing their angular distance at the time of half moon. To him also is attributed the opinion that the earth revolves round the sun.

Manetho the Egyptian, B. C. 260. His history is lost, but a poem attributed to him remains. It is a description of the heavens, filled with astrology, and containing no observations.

Eratosthenes of Cyrene, B. C. 240, is said to have observed with some celebrated astrolabes which he erected at Alexandria, which remained standing till the time of Ptolemy. Various works are attributed to him. He observed (either with a gnomon or with a meridian circle) the obliquity of the ecliptick, and the latitude of Alexandria; and from the latter, and the fact that at Syene the sun was vertical at the summer solstice, he deduced an approximation to the earth's magnitude. His approximation makes a degree to be 700 stadia. A catalogue of stars attributed to him (the oldest extant) is probably spurious, but shows that, in and about his time, the method of referring stars to their latitudes and longitudes was not practised. His value of the obliquity of the eclipticK—11 parts out of 166 of the whole circumference—was adopted by Hipparchus and Ptolemy.

Archimedes of Syracuse died B. C. 212. He observed solstices, and attempted to measure the sun's diameter. His writings show that trigonometry was as yet unknown

Hipparchus (of Bithynia?), B. C. 160–125, the greatest of all the Greeks in astronomy. In his youth he wrote a commentary on Aratus. He discovered the precession of the equinoxes, by comparing his own observations with those of Aristyllus and Timochares, or others of his predecessors. He was the first who employed processes analogous to those of plane and spherical trigonometry, for which he constructed a table of chords. He first used right ascensions and declinations, which he afterwards abandoned in favour of latitudes and longitudes. He suggested the method of referring terrestrial positions to latitude and longitude, and was probably the inventor of the stereographick projection. He determined the mean motion of the sun and of its apogee, the inequality of the sun's motion, and the length of the year, to greater exactness than his predecessors. He found the mean motion of the moon, of her nodes, and of her apogee; her parallax, eccentricity, the equation of her centre, and inclination of her orbit. His observations also led him to suspect another inequality in the moon's motion, which Ptolemy afterwards discovered (the evection.) He calculated eclipses, and used the results in the improvement of the *Elements*. He made one of the first steps towards a correct representation of phenomena, by supposing the sun to move round the earth in a circle, the earth not being at the centre. His catalogue of the longitudes and latitudes of 1081 stars was the first at all worthy of the name. If Hipparchus had possessed the pendulum and the telescope, fifty years might have enabled his successors to place astronomy in the state in which it stood at the birth of Newton. Considering his means, his observations are perhaps unequalled.

After the death of Hipparchus there is no astronomer of eminence till Ptolemy. Between them we have

Hypsicles of Alexandria, B. C. 146, wrote the 14th and 15th books of the *Elements of Euclid*, which contain some astronomical propositions.

Geminus (of Rhodes?) B. C. 70, wrote an introduction to the heavenly phenomena, containing no new discovery. It would seem he was not an observer.

Posidonius about the same time attempted to verify the measure of the earth of Eratosthenes. His writings are all lost, but many of his opinions are preserved in Cleomedes and Strabo. He remarked (though probably he was not the first who did so) the connexion of high water with the southing of the moon.

Theodosius of Bithynia, B. C. 50, left a work on spherical geometry, another on climates, and a third on the phenomena of day and night.

Sosigenes of Alexandria, B. C. 50, corrected the calendar under Julius Cæsar.

Hyginus left an astronomical description of the heavens.

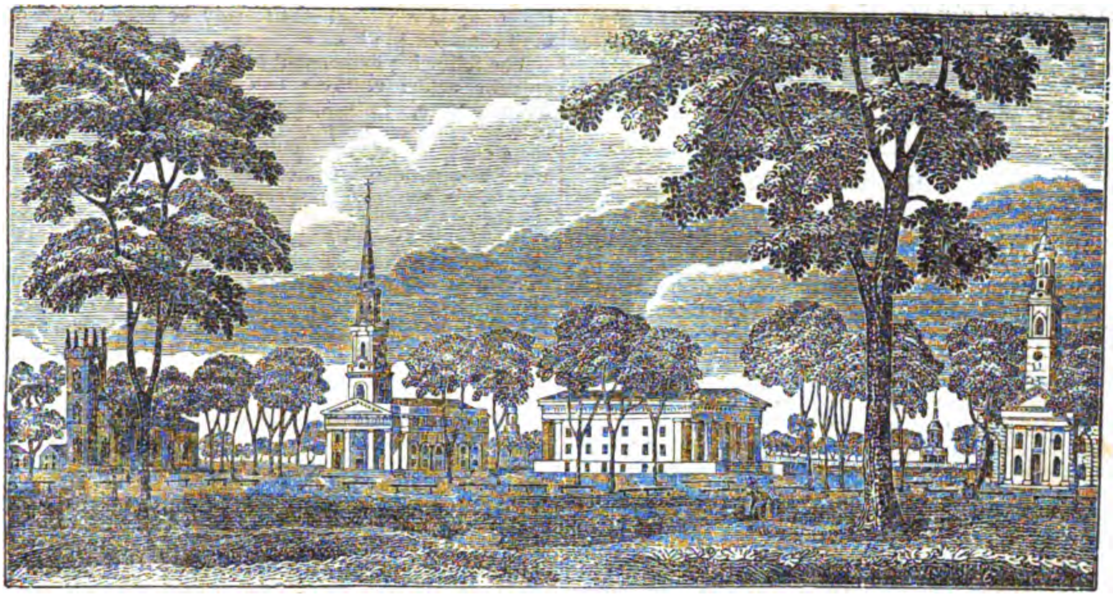
This brings us down to the birth of Christ.

THE SUNDERBUNDS.

This wild tract extends a hundred and eighty miles along the Bay of Bengal, and is filled with tigers and alligators of the largest kind, together with other creatures of similar power and ferocity. There are two passages through it, the northern Sunderbund passage, and the Balliaghaut passage. The first opens into the Hoogley, sixty-five miles below Calcutta, the other into a shallow lake on the eastern side of the city. The navigation of these channels extends more than two hundred miles through an impenetrable jungle divided by creeks occasionally so narrow, that in some places branches of trees almost meet on either side, and in others you sail upon an expanded river beautifully skirted with wood. Alligators innumerable are seen sleeping along the shores, looking like huge trunks of trees. It is scarcely possible to imagine them to be alive until they are disturbed, when they scramble with surprising activity into the stream and sink. Great numbers of natives who frequent the banks of the creeks that divide the Sunderbunds to cut wood and collect salt, are yearly devoured by these and other beasts of prey; indeed, the tigers are so ravenous that they have been known to swim off to boats and attack the crews at a considerable distance from the shore.

Notwithstanding these perils, many devotees erect their rude huts in this region of desolation. In spite of the charms which they pretend to, and possess, and their propitiatory offerings to the tigers and alligators, these ignorant fanaticks are almost invariably destroyed by them; still other fanaticks supply their places: thus the wild savages of the forest are yearly supplied with no inconsiderable portion of sacred food. It is astonishing to what lengths fanaticism will go.—*Oriental Annual.*

One catches more flies with honey than with vinegar.



NEW-HAVEN, CONN.

The city of New-Haven, a seaport and semi-metropolis of Connecticut, is thirty-five miles south-west of Hartford, seventy-six north-east from New-York, one hundred and thirty-four from Boston, and three hundred and four from Washington.

The city lies round the head of a bay that sets up about four miles north of Long Island sound, and is situated on a large and beautiful plain, which is bordered on the north partly by eminences called *East* and *West Rock*, presenting bold and almost perpendicular columns of naked trap rock, 350 to 370 feet high. Two small rivers bound the city, one on the east and the other on the west. It was incorporated as a city in 1784; three miles long from east to west, and two miles wide. It is regularly laid out, and consists of two parts, old and new towns. The old town was laid out in a large square, and is divided into several smaller squares. The central square is intersected by a beautiful street, overspread by elms. On this street are erected three handsome churches. Near the centre of the west section of this square is a new state-house, built after the model of the Parthenon. It has a commanding appearance; and its proportions, and the style of its workmanship, rank it with the best American buildings. The city contains three handsome churches for Congregationalists, and one for Methodist Episcopalians; two beautiful Gothick edifices, of stone, for Episcopalians; one for Baptists, and one for Africans. There is also a jail, an alms-house, a custom-house, a museum, two banks, two insurance-offices, an institution for popular lectures, opened during the year 1831, and six printing-offices, from which are issued five weekly newspapers, and three other periodicals. The houses of New-Haven are mostly of wood, not expensive, but handsome and convenient; and the city is one of the most pleasant in the U. States. The publick square and principal streets are finely ornamented with trees; and a great part of the houses have gardens filled with fruit-trees, which give to the city a rural and delightful appearance. The harbour is well defended from winds, but is shallow, and gradually filling up with mud; it has about seven feet on the bar at low water. The maritime commerce of New-Haven is greater than that of any other town in Connecticut. Both the foreign and the coasting trade are considerable, and packets and steamboats ply regularly between this city and New-York. The Indian name of New-Haven was *Quinnipiack*. It was first settled by the English in 1638. It was the capital of the Colony of New-Haven, which continued distinct from the colony of Connecticut till 1665. The legislature of the state meets alternately here and at Hartford. Yale college, one of the most distinguished literary institutions in America, is established at New-Haven, it was incorporated in 1701; was originally placed at Killingworth; in 1707, removed to Saybrook; in 1717, to New-Haven. There are ten college buildings; four halls, 100 feet by 40, and four stories high, containing thirty-two rooms each for students; a new and convenient chapel, one story of which is appropriated to the theological school, and another to the college library; two other buildings, containing rooms for recitations, lectures and libraries; a dining-hall, of stone, with an elegant apartment above for the mineralogical cabinet and lectures, a chymical laboratory; and medical college, a large edifice, of stone. The college library contains 9500 volumes, and the students' libraries 9000. The philosophical and chymical apparatus are very good. The cabinet of minerals is the most valuable in the U. States. It contains above 16,000 specimens. The number of instructers in the academical department of Yale college is twenty; the number of alumni, 4505; the number of students, without including medical, theological and law students, averages nearly 300. Commencement is held on the third Wednesday in August. There are three vacations, viz. from commencement, six weeks; from the second Wednesday in January, two weeks; and from the first Wednesday in May, four weeks. In 1822, a theological school was established in connexion with this college. The number of students at present is 42; and there are three professors. There is a medical school, the lectures of which begin six weeks after the college commencement. It has six professors and 48 students. There is also a law school, having two professors, and 44 students. These numbers are all given for the year 1831. The city is also celebrated for the number of its boarding schools and smaller seminaries for the young of both sexes. The average number of persons who are here from abroad for the purpose of education is supposed to be rarely below a thousand. *Blue Laws* is a name given to the quaint regulations of the early government of New-Haven will have the candour to admit, for all reason proves it, and all experience confirms it.

The Remedy.—But there was hope of redemption in the land. From a spark which originated from the mere suggestion of the evils of intemperance, the spirit of reform was nursed into a flame that overspread our whole country. With the rapid flight of a celestial bird, the voice of temperance has winged its way into every city and town, every village and hamlet from the St. Lawrence to the Gulf of Mexico, from the shores of the Atlantic, to beyond the valley of the Mississippi. And it has carried "a healing in its wings," and admonition in its voice, that deserves the gratitude of religion, and the applause of virtue. For temperance has purified the channels of the nation's prosperity of their corruption, exalted the standard of morals, taught virtue to lift up her head, religion to assert her voice, and given to all who receive her, the reward of peace and happiness. Sophistry has been confounded, prejudice dissipated, habit and bigotry overcome, errour enlightened, honesty in unbelief redeemed, misery alleviated, abasement regenerated, property preserved. The habitations of sorrow, have been made to smile with hope and cheerfulness, the hum of industry is heard in the places that were deserted, plenty has relieved penury and want, parents and sons wandering in the insanity of intemperance have been restored, vice has been uprooted and crime arrested;—the whirl-pool of folly has been robbed of half its victims, and the angel of destruction has been cheated of his harvest.

And the blessings of the temperance reformation do not stop here. In the great moral revolution that has taken place new light has been thrown upon the conduct of life, upon the establishment of the social system, and men have been taught to contemplate the purposes for which they were created, and the relation which they should sustain, to each other, and to their Almighty Creator. They have been taught, that in a community of human beings, a vast amount of individual responsibility rests upon every member; and that for the full discharge of that responsibility, will they be accountable to heaven. They have been shown that intemperance or its encouragement, is inconsistent with Christian practices and the profession of religion. Temperance societies have therefore lent a powerful hand to religion. They have also enlightened the world, with the results of scientifick investigations, which will prove to be of permanent utility. They have brought thousands back to that state of primitive simplicity which found in temperance a promoter of health, tranquillity and happiness, and a procurer of longevity. And they have taught tens of thousands to feel and know the delights of temperance, and to wonder at the strange infatuation that ever tempted them into its opposite. Their benevolent and philanthropick efforts have extended beyond the limits of our own country, and given a liberal impulse to the cause of the temperance reformation in Great Britain, Sweden, Russia, India, New Holland and South Africa. And the spirit of reform seems determined not to rest, till the curse of intemperance is driven from the world.

A Corollary.—Thus we behold the happy and beneficial effects of temperance organizations. Thus far we are made certain of the comparative utility and inutility of temperance and its opposite. Is it not a matter of surprise therefore, that in full view of the salutary and delightful tendency of the one, and the alarming hideousness, the destructive depravity of the other, that even at this short period, after the eyes of people have been opened and their understandings enlightened on this subject, there should be any necessity for the watchfulness of temperance organizations; that there should be any opposition in a christian land to this heaven-born enterprise, ever distributing good and counteracting evil? But so it is; and it proves to us the formidable nature of this deep-seated malady in the moral system; it evidences the power of this gigantick hydra, and the fearful tenacity of its demoniack grasp upon our country. It gives a warning to temperance men and temperance societies, to stand fast to the enterprise, to persevere in the good work, and continue to strengthen themselves, so long as a semblance of opposition remains in the land.

Who and what are the Opposition? In this matter as well as in all others, we wish all things to be called by their right names, and properly understood and explained. We wish to know on which side of the fence people are to be found, and what may be expected from them either as good citizens or good christians. "Patriotism requires that the man who loves his country, should shrink from no personal sacrifice, if he can thereby arrest some great national evil." How great is the evil of intemperance, facts have proved. And I venture to assert, that if the tax which intemperance imposes, had been imposed upon us as colonies by any transatlantick power, upon any possible pretext, there is not a man in the community who would not have felt called upon by natural justice, by the voice of patriotism and the indignation of insulted right, to shoulder his musket, and fight, boldly and manfully fight, for his liberties, his free institutions, his home and his country! It is therefore just as inconsistent with the profession of patriotism, to countenance intemperance in any way, as it would be traitorously to connive at the inroads of an enemy. Therefore they have no patriotism on their side. That the accessory is as bad as the principal, is common law. Now intemperance is an egregious vice, leading to crime of all descriptions. Those who countenance intemperance therefore, encourage vice, and become the abettors of crime. Now vice and virtue are not associates, but rather the opposite of each other; consequently they cannot have virtue on their side. The New Testament calls drunkenness wickedness; expressly prohibits it, and declares that no drunkard can enter the kingdom of heaven. Now men must be either with us or on the other side. If they are on the other side, they are countenancing intemperance, which is prohibited; and therefore living in habitual sin. This being inconsistent with the practice and duty of a christian, it follows, that they cannot have christianity on their side. We are not concerned with the argument here, for the authority is conclusive. Morality, comprises the duties of life. Both philosophy and religion have settled these duties; and men who ever reflect must know what they are. Now, if by some strange infatuation, not stranger than that of intemperance, hundreds of men had taken it into their heads, that arsenick was a substance highly nutritious and beneficial to the health; and an apothecary should sell it to them perfectly aware of its poisonous fatality, would it not be an outrage upon the community, a sin against society, and morally wrong? There seems to be nothing plainer. And the man who stood by, and encouraged it but by his silence even, would be equally culpable. And have we not the opinion of five thousand physicians in our country, that ardent spirits as drinks are in all cases useless to men in health, and absolutely destructive of the physical constitution? And have we not the testimony of rational philosophy in all ages and countries, that intoxication deranges the intellect, pollutes the affections, corrupts the morals, and undermines happiness? What then can be the difference between the moral culpability of the apothecary and the by-stander, and the dealer in ardent spirits and those who encourage its use? I can perceive none. So then they have not even morality on their side. Here then we have a view of the interesting association opposing us; the motley crew of the temperate drinkers and the drunkards; the half measure whimperers, and the traffickers; bound together no doubt by a pleasurable fellow feeling, stripped however as we have seen them of all patriotism, of all virtue, of all religion and of all morality! By no means however let it be understood, that the temperance organization assumes to itself *all* the decency, virtue, religion, patriotism and morality; this would savour too much of an intemperate vanity, which being inconsistent with our professions, might result to our injury. But what a field is this for moral effort! How loud the call, and how rich the prospect of a glorious harvest for the efforts of true patriotism and real benevolence every where!

EXAMPLE AND ITS CONSEQUENCES.—"Intemperance is a social festive vice; apt, beyond any vice that can be named to draw in others by the example. The drinker collects his circle; the circle naturally spreads; of those who are drawn within it, many become the corrupters and centres of sets and circles of their own; every one countenancing, and perhaps emulating the rest, till a whole neighbourhood be infected from the contagion of a single example." So said Dr. Paley, half a century ago; and this is what we say now. And what is the result of this imitation of a single example? Why, inevitable habitual drunkenness somewhere, with all its evils and pernicious consequences. And who now, at this age and with all the light on this subject gives us an illustration of this truth? Temperate drinkers, so called. Who are the most prominent opponents, the greatest obstacles to the entire success of the temperance reformation? Tipplers and temperate drinkers. Has any one of them a son, upon whom his heart and hopes are fastened; and upon whose future character the glory or infamy of his race depends? I would entreat him, by the affections of that heart, by the tenderness of those hopes, by his love of character, and his regard for duty, to beware, lest the contagion of his example, should bring that son before him a living monument of folly, or that the sepulchre should too speedily teach him to mourn a premature bereavement. What recompense is this, for the poor pleasure of temperate drinking? Suppose drinking makes one bold and garrulous with talk; suppose it makes one vociferous in mirth; admit it affords an evanescent excitement, or inspiration if you please, and enables one the more ingeniously to lend to truth the graces of fiction; are these momentary gratifications which give one nothing, and enter not into rational enjoyment, are these any sort of a compensation for the languor, the listlessness, the pains, the horrours, the abasement, the wreck of soul and body which are only a part of their polluting and polluted train? How long shall the voice of experience teach wisdom? To what end has the finger of God on every page of his great book of nature and of light, traced the lessons of temperance and moderation? It is incumbent upon every individual, to enter into a compact of total abstinence, for every man who does so rescues three at least of his less fortunate fellow beings from destruction.

DUTIES OF MINISTERS OF THE GOSPEL.—Societies of a new character are springing up, called conference temperance societies; and they are bringing into the field an influence, that has been too long suffered to lie dormant. They are composed of clergymen, and they make it the duty of every member to preach expressly on the subject of temperance, at least once in a year. And this is as it should be. For what duty is more incumbent upon a minister of the gospel, than that he should endeavour to overcome all obstacles to its success? And is not intemperance an obstacle? Is not temperance a virtue? And what is the opposite of virtue, but vice? And is vice consistent with the christian religion? Then why can christians complain? Let every man in every station know his duty, and knowing it, fulfil it. We want no vacillating counsels; no whimpering, time-serving apologies; none of your cold, reluctant, half-way measures. Let us do up the whole business. For if the things which have been stated are correct, the path of duty and of safety is plain.

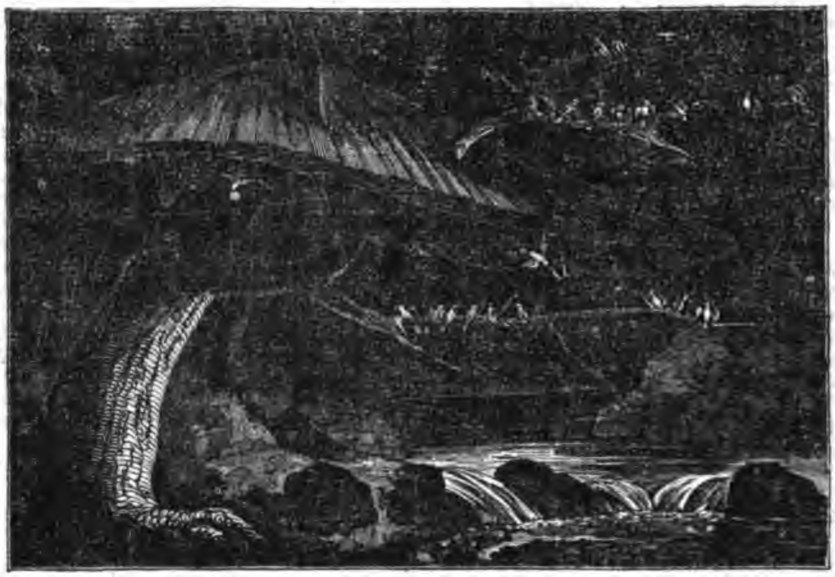
DIGESTIVE POWERS OF THE STOMACH.

Dr. Beaumont, of the United States Army, has published his "Experiments and observations on the Gastrick Juice and the Physiology of Digestion." These experiments have been made from time to time, during the last eight years, on a Canadian Frenchman, who, in 1822, was accidentally wounded by the discharge of a musket: the contents of which were received in his left side, and carried away the parts so as to wound the lungs and stomach very seriously.

The very remarkable result was, that the man recovered his health; but in the healing of the parts, the coats of the stomach attached themselves to the lips of the external wound, and formed an artificial aperture to the stomach; so that this organ could be examined at any time, by pushing in a valve which the stomach had formed to close the aperture, so as to prevent its contents from escaping thereat. With advantages for gastrick experiments, never before enjoyed, Dr. Beaumont applied himself to this interesting inquiry with a degree of assiduity and patience highly commendable. The work which he has recently published, as the result of his experiments and observations, is interesting, and valuable. The following rules are deduced from Dr. Beaumont's work.

1. Bulk; or food possessing a due proportion of innutritious with nutritious matter is best calculated to preserve the permanent welfare of the organs of digestion, and the general interests of the system.
2. The food should be plainly and simply prepared, with no other seasoning than a little salt, or occasionally a very little vinegar.
3. Full and deliberate mastication or chewing is of great importance.
4. Swallowing the food slowly, or in small quantities, and at short intervals is very necessary.
5. A quantity not exceeding the real wants of the economy is of prime importance to health.
6. Solid aliment thoroughly masticated, is far more salutary than soups, broths, &c.
7. Fat meat, butter, and oily substances of every kind are difficult of digestion, offensive to the stomach, and tend to derange that organ and induce disease.
8. Spices, pepper, stimulating and heating condiments of every kind, retard digestion and injure the stomach.
9. Coffee and tea debilitate the stomach and impair digestion.
10. Alcohol, whether in the form of distilled spirits wine, beer, cider, or any other intoxicating liquors, impairs digestion, debilitates the stomach, and if persevered in for a short time, always induces a morbid state of that organ.
11. Narcoticks of every kind impair digestion, debilitate the stomach, and tend to disease.
12. Simple *water* is the only fluid called for by the wants of the system: artificial drinks are all more or less injurious: some more so than others: but none can claim exemption from the general charge.
13. Gentle exercise after eating promotes digestion more than indolent inactivity or rest. Violent exercise with a full stomach is injurious.
14. Sleep soon after eating retards digestion, and leads to debility and derangement of the stomach.
15. Anger, fear, grief, and other strong emotions disturb digestion, impair the functional powers of the stomach, and deteriorate the secretions generally.

Alexander loved his horse Bucephalus; Numa, a lap-dog; Augustus, a parrot; Caligula, a horse; Virgil, a butterfly; Nero, a starling; Commodus, an ape; Heliogabalus, a sparrow; Honorius, a chicken.



THE SOCIABLE GROSBEAK.

"I observed on the way a tree with an enormous nest of those birds to which I have given the appellation of republicans; and, as soon as I arrived at my camp, I despatched a few men, with a waggon, to bring it to me, that I might open the hive, and examine its structure in its minutest parts. When it arrived, I cut it to pieces with a hatchet, and saw that the chief portion of the structure consisted of a mass of Boshman's grass, without any mixture, but so compact and firmly basketed together as to be impenetrable to the rain. This is the commencement of the structure; and each bird builds its particular nest under this canopy. But the nests are formed only under the eaves of the canopy, the upper surface remaining void, without, however, being useless; for, as it has a projecting rim, and is a little inclined, it serves to let the rain-water run off, and preserves each little dwelling from the rain. Figure to yourself a huge irregular sloping roof, and all the eaves of which are completely covered with nests, crowded one against another, and you will have a tolerably accurate idea of these singular edifices.

Each individual nest is three or four inches in diameter, which is sufficient for the bird. But as they are all in contact with one another, around the eaves, they appear to the eye to form but one building, and are distinguishable from each other only by a little external aperture, which serves as an entrance to the nest; and even this is sometimes common to three different nests, one of which is situated at the bottom, and the other two at the sides. According to Paterson, the number of cells increasing in proportion to the increase of inhabitants, the old ones become "streets of communication, formed by line and level." No doubt, as the republick increases, the cells must be multiplied also. But it is easy to imagine that, as the augmentation can take place only at the surface, the new buildings will necessarily cover the old ones, which must therefore be abandoned.

Should these even, contrary to all probability, be able to subsist, it may be presumed that the depths of their situation, by preventing any circulation and renewal of the air, would render them so extremely hot as to be uninhabitable. But while they thus become useless, they would remain what they were before, real nests, and change neither into streets nor sleeping-rooms.

The large nest that I examined was one of the most considerable I had any where seen in the course of my journey, and contained three hundred and twenty inhabited cells, which, supposing a male and female to each, would form a society of six hundred and forty individuals. Such a calculation, however, would not be exact. I have met with birds among which one male is in common to several females, because the females are much more numerous than the males. The same is the case with many species, both in the environs of the Cape and in the colony; but it is particularly so among the republicans. Whenever I have fired at a flock of these birds, I have always shot four times as many females as males.—*Vaillant's Travels in South Africa.*

FRENCH AND AMERICAN NAVY.

A statement of the comparative strength of these two Navies may be interesting at this juncture. The following it is said, is a correct statement of the French fleet.

33 Ships of the line—of which, 8 three deckers,
38 Frigates—of which, 13 of the first class,
19 Corvettes—of from 20 to 32 guns,
10 Corvettes—of 18 guns,
32 Brigs—of 16, 18, and 20 guns,
3 Schooners—of 12 guns,
20 *Steam Vessels!!*—6 guns each.

These are probably in commission—the whole number of vessels belonging the French Navy it is said count upwards of 300.

There are building, moreover, 24 ships of the line, of which, 3 are first rates.

26 Frigates,
3 Steam vessels.

The strength of the American Navy in 1834, was as follows:

7 Ships of the line—of 74 guns,
7 Frigates of the 1st. class—of 44 guns,
3 Frigates of the 2d. class—of 36 "
2 Sloops of war—of 24 "
13 do.—do.—of 18 "
9 Schooners—of 18 "

41 Vessels—total, of which 21 are in commission and the remainder in ordinary.

There are building 5 ships of the line, of which, one will carry 140 guns, (the Pennsylvania,) and 7 Frigates.

BENARES.

The city of Benares stands on the left bank of the Ganges, at a part where the river forms a fine sweeping curve of nearly four miles in length. The bank on which the city is situated is the concave side of the river, and is considerably higher than the opposing shore; so that if the town is viewed from a position in the upper part of it, from the breadth of the Ganges at this place, and the lowness of the opposite side, it has the appearance of standing on the margin of a beautifully formed bay.

Benares stands on a spot held peculiarly sacred by the Hindoos, and it has long been considered as the head quarters of brahminical learning.

The edifice, with the high minarets so conspicuous in the annexed sketch, was built by the Mohammedan emperour, Aurungzebe, it is said with the intention of humbling the pride of the Hindoos, as not only possessing a very elevated station in the city, but being also erected on the site of a Hindoo temple, removed on purpose to make room for the Mussulman mosque.

The immense flight of steps called the Ghauts of Benares, form a great ornament to the river face of the city. Various Christian missionaries are now labouring in this city.

MUSICK AMONG THE COMMON PEOPLE, IN GERMANY.

Dr. Burney, distinguished alike for his literary as well as musical talents, travelled through various parts of Europe, to collect materials for his "*General History of Musick*"—which has been styled by an English writer, a "very elaborate and intelligent work." In his work entitled "The Present State of Musick in Germany," he notices the general custom, particularly in Bohemia, of the rudiments of musick being taught in all the publick schools. He observes, Vol. II. p. 3—6.—

"I had frequently been told, that the Bohemians were the most musical people of Germany, or perhaps of all Europe; and an eminent German composer, now in London, had declared to me, that if they enjoyed the same advantages as the Italians, they would excel them. I never could suppose effects without a cause; nature though often partial to individuals in her distribution of genius, and talents, is never so to a whole people. Climate, no doubt, contributes greatly to the forming of manners and customs; and it is, I believe, certain that those who inhabit hot climates, are more delighted with musick, than those of cold ones—perhaps from the auditory nerves being more irritable in in the one than in the other, and from the sound being propagated with greater facility; but I could by no means account for climate operating more in favour of musick upon the Bohemians, than on their neighbours, the Saxons and Moravians." "I crossed the whole kingdom, from south to north," says the Doctor, "and being very assiduous in my inquiries, how the common people learned musick, I found out, that not only in every large town, but in all the villages, where there is a reading and writing school, children of both sexes are taught musick.

"The Organist and Cantor, and the first violin of the parish church, who are the school-masters, gave me all the satisfaction I required. I went into a school, which was full of little children, of both sexes, from six to ten or eleven years old, who were reading, writing, and playing on violins, hautboys, bassoons, and other instruments. The organist had in a small room in his house, four clarichords, with little boys practising on them all; his son of nine years old, was a good performer."—"He himself complained of loss of hand, for want of practice, and said, that he had too many learners to instruct in the first rudiments, to be allowed leisure for study, and that he had his house not only full of other people's children, but his own."

It is not too much to say, that the whole population of Germany are musicians. Every body performs on some instrument, with greater or less skill, but all are acquainted with the rudiments of musick, and the works of the principal composers. They are in the habit of meeting together, and performing in concert the works of the best authors; it being no uncommon thing to hear, in a village publick house, a symphony or quartetto, executed by blacksmiths and weavers, that would put to shame the performances of most of the amateurs and many of the professors among us.

Family Minstrel.

Pensioners.—The number of revolutionary pensioners on the rolls of the War Department under the Act of March 18th, 1818, was, on the 7th Nov. last 10,566; invalid pensioners, 3,940; pensioners under the Act of June 7th, 1832, 27,978. Total, 42,484. Of revolutionary pensioners there are known to have died during the year ending Nov. 7th, 425; invalid pensioners, 62; pensioners under the Act of 1832, 1,120.

FUNERAL CEREMONIES OF THE ARABS.

The Arabs, who set little value on the lives of mankind, respect their remains, and take the utmost care of their interment; the want of it they consider one of the greatest misfortunes that can happen, and they die with composure when they are certain of leaving some one behind them to bury them. The severest punishment, therefore, among them is to be cut to pieces and thrown to the dogs. Their funeral ceremonies, as far as I have had an opportunity to observe them, are as follows:—Scarcely has the Arab breathed his last, when his body is carefully washed; after which it is wrapped up in a winding-sheet of white cloth reserved by the Arabs for that purpose. This cloth is manufactured in the town of Arabia; but they set a much higher value upon that which is brought them by pilgrims from Mecca, and which has been blessed by the principal Iman. This Benediction is expensive, it is true; but the singular favours annexed to it make them forget what it costs. As soon as the dead body is purified, it is laid upon a kind of litter, and is carried to the place of interment, either on horseback, or by the friends and relations of the deceased. While the men are employed in digging the grave, the women squat down in a circle around the body, which they feel and uncover, and afterwards converse together with much indifference; but every now and then they break off their discourse to give vent to their lamentations, to ask the body questions, to beseech it, in the most earnest manner, to return again and take up its abode amongst them. "Why," say they, "hast thou quitted us?" Did we not prepare thy *courcouson* well? Alas! shall thy children behold thee no more? At present, since thou hast plunged them into sadness and wo, nothing remains for them but to sigh and to weep. Ah! return again with us; nothing shall be wanting to thee. But thou hearest us no more; thou no longer givest us an answer to our words; thou hearest only our sighs," &c., and other expressions of the same kind, which I have often made the Arabs translate to me, whilst I was assisting at these mournful ceremonies. These dismal lamentations, which display a natural and pathetick eloquence, would have a powerful effect in moving the hearts of the spectators, did they not see these very women, a moment after, throw aside that external appearance of the deepest grief, talk and laugh together, and afterwards return to their former wailings. During these tender complaints, they tear their hair, and open the veins of their temples with their nails, while the blood trickles down, mingled with their tears, and exhibits an appearance of the deepest despair. When the grave is finished, the body is deposited in it on its side, and with the face turned towards the east. One of their *papas* puts into his hand a letter of recommendation to Mahomet; after which a kind of arch is formed over it with branches of trees, in order that the earth may not touch it. When the grave is covered with earth, other branches of trees are laid over it, with a quantity of large stones, to prevent savage animals from devouring the body in the night time. In the middle of the stones, an opening is left where they deposite earthen vessels, and other family utensils; but this is only done to Arabs of a certain rank. Before they quit the grave, they erect in the middle of it a kind of funeral flag, which is generally a piece of the clothes of the deceased, fixed to the end of a stick. When the ceremony is finished, each returns home with the greatest tranquillity, and without showing in their exteriour appearance, any signs of the melancholy duty they had been discharging. The nearest relations and friends of the deceased go, from time to time, and visit his tomb. They remove some stones from it, and in part uncover the body, to see that the person has not returned to life; and when the smell convinces them of the contrary, they renew their wailings and lamentations as above described. Some scatter a little lime over the stones, to make this rude tomb look somewhat brighter. On every holiday the Arabs go in crowds to visit the tombs of their dead, and to bedew them with their tears.—*Poiret's Travels,* 1773.

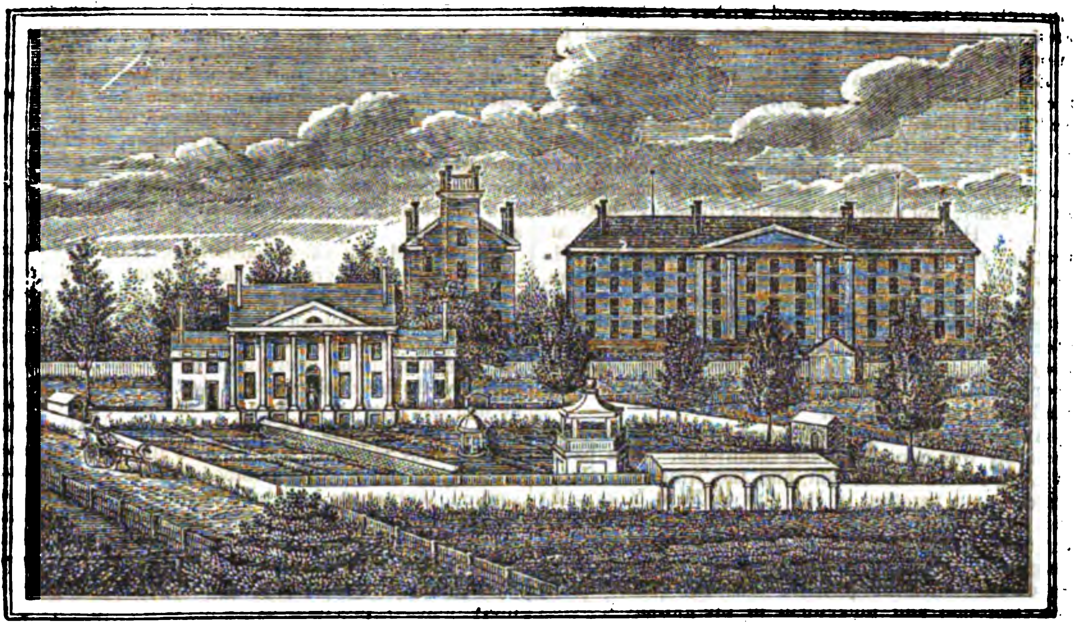
WESLEYAN UNIVERSITY, MIDDLETOWN, CONN.

This institution was incorporated by the Legislature of Connecticut in 1831. The buildings are situated in Middletown, in the state of Connecticut, and are the same that were lately occupied by the American Literary, Scientifick, and Military Academy, under the care of Captain Partridge. The Academy having failed in its operations, the buildings were vacated and left useless on the hands of the proprietors. At this time, several annual conferences of the Methodist Episcopal Church, were preparing to make a united effort to establish a college under the patronage of said church: and were holding their privilege of location in the market, for the purpose of securing a liberal local subscription. To secure this privilege to the city of Middletown, the proprietors of the Academy offered their buildings as a gratuity, for the use of a college or university for ever, on condition that there should be an additional endowment raised, of $40,000. The citizens of Middletown and its vicinity, with a commendable zeal, by a publick grant, and by private subscriptions, pledged about $18,000 of the endowment. These offers, together with the other local advantages, fixed the university in its present location.

There are many circumstances which render this a favourable place for the university. The size of the city is favourable—were it much smaller, it could not afford the accommodations necessary for such an institution. Were it much larger, or were it a place of commercial importance, it would be much more difficult to control the students, and preserve their morals. It is central and easy of access—central, because it is within twelve or fifteen hours sail of New York, the great commercial emporium of the nation—easy of access, because it is on the navigable waters of a river, on which steam-boats ply daily, from New York in one direction, and into the interiour of New England in the other.

The site itself is delightful. Few, if any, excel it. The buildings are on an eminence, about one half mile from the river, commanding a view of the town, some neighbouring villages, the valley of the river for some distance, and a most fruitful surrounding country, highly cultivated and interspersed with dwellings, gardens, and orchards, in rich rural loveliness. In a word, it is a rural city, reclining in quietude on the slope of a verdant valley, washed by a stream that heads in another empire, and by which it stands closely connected with the great and busy world around, without partaking much of the bustle of its business, or the contagion of its moral corruptions. The air is salubrious, and the water fine—and perhaps no place in the Union surpasses it for health. And it is certainly not the least among the recommendations of the place, that the inhabitants partake largely of that character of morality, industry, frugality, intelligence, and equality, for which New England in general, and Connecticut in particular, have always been noted.

The plan of education struck out by the board of Trustees and Visiters, who are the immediate guardians of the Institution, is well suited, it is believed, to the present circumstances and wants of the community. Radical changes, in old institutions, are effected with difficulty; hence while the literary seminaries of a lower and less permanent character have been greatly improved, and in some instances, throughly renovated, by the increased experience and light of succeeding generations, our most richly endowed and popular colleges and universities, have remained almost station-



THE WESLEYAN UNIVERSITY.

ary. The Wesleyan University, however, is constituted on a new, and as is believed, on an improved plan. Some of the peculiar features are the following. 1. The scholars are classed, in the different departments of science and literature, according to their advancement in each, without reference to their standing in other departments, or to the time they have been in college. The standing of the students is ascertained and fixed, by timely and thorough examinations. 2. When, by these examinations, an under graduate is found worthy of a degree, he is admitted to the accustomed honours of a graduate. 3. Though none but classical scholars are admitted to a degree of A. B. all the other advantages of the University may be enjoyed by those who wish to receive instruction in the sciences and modern literature, to the exclusion of the classics; and these are also entitled to a diploma, specifying their attainments in the studies they have pursued. 4. The professors have a moderate salary *secured* to them, but all above this is contingent, and depends on the success of the University, and the industry and ability of the professors. 5. Provision is made for the removal of such professors from office as are found to be incompetent or inefficient. 6. The government is more strictly paternal, and less by statute laws and a penal code, than is common in most of our American colleges. Such, in a few words, are the local advantages, the character and prospects of the Wesleyan University. With the ordinary blessings of Providence, we may expect, in a few years, to see this university taking a high rank among the useful institutions of our country. The President of this institution is the Rev. Wilbur Fisk, D. D.

FRANCE.

The following official summary of the imports and exports of France for 1833, will prove, at this moment, particularly acceptable to our readers:

From official tables just published by the Custom House, it appears that, in 1833, the imports into France by sea were 467,117, 179f, and by land 226,158,573f; total imports, 693,275,752f. The exports were—by sea, 550,408,559f; by land, 115,907,753f; total, 766,316,312. —The vessels that arrived were—French 3561, tons 358,157; foreign 5115, tons 622,735. These vessels brought merchandise, from French colonies, 64,095,-215f; and from foreign countries, 403,021,964f. The departures were—French vessels 3,075, tons 248,840; foreign 4,580, tons 464,028. They took goods, for French colonies, 42,626,864f; for foreign countries, 507,778,695f. The goods in bond, on the 31st December, 1833, were 112,960,111f. The goods that passed in transitu through France in 1833, were 107,871,655f. The goods exported with premium in the same year were 99,260,916f, and the premiums paid 18,485,634f.

GIPSIES.

In England they are still pretty numerous, but are found only in distant places, seldom coming into the towns excepting in small companies of two or three persons. In Germany, Sweden and Denmark, they have become rare, as also in Switzerland and the Low Countries. In Italy their numbers are diminished. In Spain it is said there are 50 or 60,000 of them. In Transylvania they are most numerous; for in a population of 1,700,000 souls, there are reckoned 104,000 gipsies. We do not exaggerate in estimating the Tzengarian or gipsy population in Europe at nearly a million; in Africa 400,000; in India at 1,500,000, and about 2,000,000 in all the rest of Asia—for except in Asiatick Russia, China, Siam, and Japan, they are everywhere to be found. Hence we may deem the totally population of these people to be 5,000,000.

EXECUTION OF CAPTAIN HALE.

The case of Capt. Nathan Hale has been regarded as parallel to that of Major Andre. This young officer was a graduate of Yale College, and had but recently closed his academick course, when the war of the revolution commenced. Possessing genius, taste, and ardour, he became distinguished as a scholar; and, endowed in an eminent degree with those graces and gifts of nature which add a charm to youthful excellence, he gained universal esteem and confidence. To high moral worth and irreproachable habits were joined gentleness of manners, an ingenuous disposition, and vigour of understanding. No young man of his years put forth a fairer promise of future usefulness and celebrity; the fortunes of none were fostered more sincerely by the generous good wishes of his associates, or the hopes and encouraging presages of his superiours.

Being a patriot upon principle, and an enthusiast in a cause, which appealed equally to his sense of justice and love of liberty, he was among the first to take up arms in his country's defence. The news of the battle of Lexington roused his martial spirit, and called him immediately to the field. He obtained a commission in the army, and marched with his company to Cambridge. His promptness, activity, and assiduous attention to discipline, were early observed. He prevailed upon his men to adopt a simple uniform, which improved their appearance, attracted notice, and procured applause. The example was followed by others, and its influence was beneficial. Nor were his hours wholly absorbed by his military duties. A rigid economy of time enabled him to gratify his zeal for study and mental culture.

At length the theatre of action was changed, and the army was removed to the southward. The battle of Long Island was fought, and the American forces were drawn together in the city of New York. At this moment it was extremely important for Washington to know the situation of the British army on the heights of Brooklyn, its numbers, and the indications as to its future movements. Having confidence in the discretion and judgement of the gallant Colonel Knowlton, who commanded a Connecticut regiment of infantry, he explained his wishes to that officer, and requested him to ascertain if any suitable person could be found in his regiment, who would undertake so hazardous and responsible a service. It was essential, that he should be a man of capacity, address, and military knowledge.

Colonel Knowlton assembled several of his officers; stated to them the views and desires of the General, and left the subject to their reflections, without proposing the enterprise to any individual. The officers then separated. Captain Hale considered deliberately what had been said, and finding himself by a sense of duty inclined to the undertaking, he called at the quarters of his intimate friend, Captain Hull, (afterwards General Hull,) and asked his opinion. Hull, endeavoured to dissuade him from the service, as not befitting his rank in the army, and as being of a kind for which his openness of character disqualified him; adding that no glory could accrue from success, and a detection would inevitably be followed by an ignominious death.

Captain Hale replied, that all these considerations had been duly weighed, that "every kind of service necessary to the publick good was honourable by being necessary," that he did not accept a commission for the sake of fame alone, or personal advancement: that he had been for some time in the army without being able to render any signal aid to the cause of his country, and that he felt impelled by high motives of duty not to shrink from the opportunity now presented.

The arguments of his friend were unavailing, and Captain Hale passed over to Long Island in disguise. He had gained the desired information, and was just on the point of stepping into a boat to return to the city of New York, when he was arrested and taken before the British commander. Like Andre, he had assumed a character, which he could not sustain: he was "too little accustomed to duplicity to succeed." The proof against him was so conclusive, that he made no effort at self-defence, but frankly confessed his object; and, again like Andre, without further remarks "left the facts to operate with his judges."—He was sentenced to be executed as a spy, and was accordingly hanged the next morning.

The sentence was conformable to the laws of war, and the prisoner was prepared to meet it with a fortitude becoming his character. But the circumstances of his death aggravated his sufferings, and placed him in a situation widely different from that of Andre. The facts were narrated to General Hull by an officer of the British commissary department, who was present at the execution, and deeply moved by the conduct and fate of the unfortunate victim, and the treatment he received. The provost-martial, to whose charge he was consigned, was a refugee, and behaved towards him in the most unfeeling manner; refusing the attendance of a clergyman and the use of a bible, and destroying the letters he had written to his mother and friends.

In the midst of these barbarities, Hale was calm, collected, firm; pitying the malice that could insult a fallen foe and dying man, but displaying to the last his native elevation of soul, dignity of deportment, and an undaunted courage. Alone, unfriended, without consolation or sympathy, he closed his mortal career with the declaration, "that he only lamented he had but one life to lose for his country." When Andre stood upon the scaffold, he called on all around him to bear witness, that he died like a brave man. The dying words of Hale imbodied a nobler and more sublime sentiment; breathing a spirit of satisfaction, that, although brought to an untimely end, it was his lot to die a martyr in his country's cause. The whole tenour of his conduct, and this declaration itself, were such proofs of his bravery, that it required not to be more audibly proclaimed. The following tribute is from the muse of Dr. Dwight:

"Thus, while fond virtue wished in vain to save,
Hale, bright and generous, found a hapless grave;
With genius' living flame his bosom glowed,
And science charmed him to her sweet abode;
In worth's fair path his feet adventured far,
The pride of peace, the rising grace of war."

There was a striking similarity between the character and acts of Hale and Andre, but in one essential point of difference the former appears to much the greater advantage. Hale was promised no reward, nor did he expect any. It was necessary that the service should be undertaken from purely virtuous motives, without a hope of gain or of honour; because it was of a nature not to be executed by the common class of spies, who are influenced by pecuniary consideration; and promotion could not be offered as an inducement, since that would be a temptation for an officer to hazard his life as a spy, which a commander could not with propriety hold out. Viewed in any light, the act must be allowed to bear unequivocal marks of patriotick disinterestedness and self-denial. But Andre had a glorious prize before him; the chance of distinguishing himself in a military enterprise, honours, renown, and every allurement, that could flatter hope and stimulate ambition. To say the least, his personal advantages were to be commensurate with the benefit to his country. But whatever may have been the parallel between these two individuals while living, it ceased with their death. A monument was raised and consecrated to the memory of Andre by the bounty of a grateful sovereign. His ashes have been removed from their obscure resting place, transported across the ocean, and deposited with the remains of the illustrious dead in Westminster Abbey. Where is the memento of the virtues, the patriotick sacrifice, the early fate of Hale? It is not inscribed in marble, it is hardly recorded in books. Let it be the more deeply cherished in the hearts of his countrymen.—*Sparks.*

"A farmer in the neighbourhood of Doncaster, was once met by his landlord, who told him he had some thoughts of *raising* his rent: to which the farmer replied, 'I am very much obliged to you, sir; for indeed I cannot *raise* it myself.'"

FEMALE EDUCATION.

The destination of females in life is much more easily foreseen than that of the other sex; women above a certain rank are seldom required to earn their living, and even where this is the case, the modes in which it can be done are few; whereas the professions which men pursue are numerous.

The absence of all right motives, and the substitution of what are termed "accomplishments," for mental culture, are the great defects in the present system of female education. It is wholly overlooked that all excellence beyond mere mechanical power must arise from *mind*, and that accomplishments have no value without intellectual acquirements.

Persons of limited income, whether derived from trade or other sources, often educate their daughters with a view to their becoming governesses, under the idea that such a course will best advance them in life. It is generally expected, and supposed, that a governess should teach, or at least be able to superintend, every branch of instruction, and it is consequently necessary that she should learn every thing. As soon, therefore, as she can read or write, she is placed upon a musick stool, and devotes from one to three hours a day to the practice of the piano-forte, the harp, and singing. A French master is also engaged, and, after the lapse of two or three years, probably dancing and an Italian master are added. The parents generally take the qualifications of the instructer upon trusts; and the expense being an important consideration, when a school is chosen, it is most commonly one which gives the greatest apparent quantity of instruction for the least money.

The early education of children mostly falls under the direction of females, and this task requires few or none of the ornamental arts of life; it calls for the exercise of a sound judgement, calm temper, steady perseverance, unrelaxed energy, warm affection, and subdued sensibility, combined with a simplicity of taste and feeling which can enter into the thoughts, action, and disposition of childhood. The cultivation of these qualities, then, should be the aim of those whose position in life obliges them to educate their daughters for the situation of instructers. A person so educated would rise merely from the force of her superiour character; and she would not despise those whose honest ambition had made her what she was, nor would she be unfitted to fulfil her duties in the same sphere with them pleasurably and advantageously. The more wealthy classes, who are generally sensible of the importance of a good education, need persons who can be trusted with the early management of their children; and they daily feel and lament the small number of those who are really fitted for the task. Those, then, who are possessed of judgement, temper, and practical knowledge, will be more sought and better rewarded than the mere musician, artist, and linguist. We do not mean to exclude these arts from education; but we protest against their cultivation to the total neglect of all the higher qualities of the mind.

It is vain to imagine that what are called accomplishments will alone enable a female to advance her rank by marriage, even if that should be considered as the great object of her life. Birth, fortune, and the conventional manners which belong to the wealthiest classes must still be wanting, and the lack of these will generally be a bar to the desired elevation. If the only object proposed to a woman be marriage, and she remain single, the end not being obtained, what other object has she to turn to? If her ambition has been directed to a union with rank, wealth or great talent, and if, when all these have slipped from her grasp, she connects herself in despair with inferiour station, poverty, ignorance or folly, she will despise both herself and him whom she has promised to love; she will have sinned against truth, and having forfeited self-respect, will be indifferent to the respect of those around her.

On the contrary, when a woman has been taught that her highest ambition must be limited to the quiet and unostentatious fulfilment of the duties which will inevitably fall to her lot, whether it be high or low,—to the acquirement of those virtues, the cultivation of those talents, which will embellish her own existence, and lighten the toil or charm or leisure of others,—whatever may be the event, her ambition cannot be blighted, for such qualities must be always called into exercise; they are confined to no station, and will be valued, loved, and admired in every relation of life.

In order, then, to direct all female education right, there are three points to be considered—the general temperament of the sex, and next the individual character; the general nature of their intellect, and the nature of the individual intellect; and, finally, the probable destination of the individual educated.

Women generally possess an acuteness of sensibility, and a liveliness of imagination, which render them peculiarly susceptible to impressions, but often prevent those impressions from being either deep or lasting; this has given rise to a caprice and versatility which are proverbial. This excess of feeling and imagination produces two apparent contradictions in the female character—a tendency to be easily diverted from any line of conduct, and a disposition to prejudice. Our faculties, however they may be classed, are all good in themselves, and are bad only in their excess. Thus, the sensibility of women produces those sentiments of tenderness and compassion which fit them for the various offices which nature has assigned to them; their lively imagination leads them to embellish the monotony of their existence by all those harmless allusions which give a value and a charm to their slightest duties and employments; but where this sensibility is too much indulged, it begets an over-wrought excitability, which is content to feel rather than to act; and this, united with unrestrained imagination, magnifies trifles into evils, inconveniences into miseries; the mind sinks under supposed suffering, and converts the realities of existence into an imagined succession of fictitious pains and pleasures. In this state of mind, mere ideas are assumed as practical truths, opinions which are the growth of a sickly intellect, become prejudices which can neither be dispelled nor contradicted by the force of reason or experience. Thus a woman becomes a mere dreamer, or only acts from the impulse of feeling; no importance is attached to the necessary details of her life, while an undue value is given to its trifles; exertion is palsied or misapplied, and conduct is controlled by external and accidental circumstances, rather than by settled principles; while the reasoning powers are perverted or subdued for want of exercise. Where reason is wanting, judgement cannot act, and thus the woman becomes the wayward, capricious, irrational and frivolous being, which it is but too much the custom to represent her. She is not, however, adapted to be merely a useless or mischievous member of society any more than man, although she becomes so by misapplication of her powers. Her duties are as numerous as those of the other sex, her influence as great, indeed we believe greater; for if the conveying of the first rudiments of morals to the young, and the enforcing them by example, be her duty, and if upon the attainment of virtuous habits depends the future goodness of a rising generation, surely the importance of woman in society cannot be denied.

By importance we do not mean any overbearing superiority or assumption of influence; the strict performance of the task assigned to her demands far different qualities—gentle firmness, patience, tenderness, and quiet but steady devotion to the great object of her life.

It is, therefore, necessary to inspire women early with a just sense of their true position in society, and to show them that their future respectability and worth will depend upon the practice of the virtues we have pointed out rather than upon the short-lived charms of beauty and youth, or the advantages which mere accomplishments confer.

We are greatly governed by feelings, and some of these require subjection, others encouragement. Moderation in their exercise is the point to be insisted on. Excess of benevolence produces thoughtless profusion; excess of maternal affection leads to foolish and pernicious indulgence; and excess of sensibility to quickness of temper, defect of judgement, and many more fatal errours; but without sensibility there will be no natural affections, no admiration of the great and beautiful, and consequently no incitement to exertion. As the feelings prompt to action, so must they be guided and regulated by the reason.

We have indicated some of the errours induced by an over-excited sensibility acting upon a lively imagination; these can only be counteracted by strengthening the reason. But a deficiency in the sentiments and imagination lead to want of mental energy and to dulness in the natural affections. When this occurs, the feelings and the imagination must be cultivated and stimulated, and this may best be affected by placing the pupil in situations where her sensibility will be excited; where she will be called upon to act in the defence, protection, or assistance of others; where she will be made to feel herself of value, and capable of contributing to the welfare of her fellow creatures.

Truth, as in every thing, should here also be the basis of education; but to a mind so constituted, it may be presented with the embellishments of language, poetry and art. Fiction, which has a moral tendency, may be judiciously mingled with graver studies to quicken the powers of the imagination.

On the contrary, where sensibility and imagination prevail to excess, truth only should be the intellectual food; the mind should be accustomed to separate the probable from the real; it should be taught to look upon the miseries of the world rather than the fancied woes of poets, or the imagined sufferings of heroes and heroines; the excited feelings should expand themselves in action; constant healthy employment should be found for the mind, and it will then cease to waste its energies upon fictitious or exaggerated distress.

Bodily and mental indolence, to which females are prone both from nature and education, ought to be vigorously contended against—health of mind and body can only be ensured by action; they are so intimately connected that they mutually injure or assist each other. And here we may advise mothers upon the great importance of attending to the dress of their daughters. Entire freedom from bodily restraint is indispensable. Boys enjoy it—why should not girls be allowed the same advantages? Tight stays, tight shoes, back-boards, braces, and stocks, those inhuman inventions of a barbarous age, limit and distort the natural movements of the body, and sympathetically cramp the healthy operations of the mind. Such restraints are supposed to give elegance of carriage and perfection of form, while in fact they only produce deformity. The contracted waist, constrained movements, and helpless limbs, which result from tight lacing, are no more consistent with grace than the hectick bloom on the transparent skin of consumption with real beauty.

The occupations of women, being mostly sedentary, require to be counteracted by exercise. Females, from physical causes, frequently find walking painful, and shelter themselves under some excuse to avoid this most healthful of all recreations. They should, therefore, be early taught that attention to their personal health is of equal importance with mental culture, and that in truth the mind can neither work wisely nor usefully unless it be supported by bodily health; and hence the constitutions of men often sink under mental exertion; it is however probable that in such cases the evil might have been prevented, and the intellectual strength have remained equally great, or greater, by attention to exercise.—Among females it is generally the case that a sickly mind accompanies a sickly constitution; it is also true that the proper exercise and attendance to the preservation of health might prevent both evils.—*Household Year-book.*

ELEPHANT HUNT.

When the chiefs call their men together for the express purpose of hunting, the *inglovu* (elephant,) and panther, or *amqputi*, most frequently constitute the objects of the chase. On those occasions, which however do not occur very often, the concourse is considerable; and they sometimes remain in the fields or woods for several days together. Connected with their pursuit of the first-mentioned animal are various particulars that may, probably, be interesting to the curious, as they furnish further evidence of the strength of their superstitious prejudices. By these they are literally kept in bondage unto fear; from which dreadful chain nothing less than a knowledge of that Divine and gracious Providence which mercifully presides over the children of men can possibly deliver them. For lack of this knowledge, they are perishing daily.

On Saturday, the 6th of May, 1826, a numerous herd of elephants was discovered in the immediate vicinity of the station, which gave me an opportunity of witnessing the astonishing excitement produced by circumstances of this nature, and the manner in which they are accustomed to pursue those prodigious creatures. The signal was given by certain individuals, perched on the different highlands round about, whose stentorian powers served as telegraphick mediums of intelligence, each responding to the shouts of the other. By this means an immense concourse of men and dogs were speedily assembled near the deep and bushy ravine, in which the animals had taken refuge. The clamour of the hunters and the howlings of dogs, reverberated by the precipices, and echoing in the disturbed recesses, now became tremendous.

The march of the herd to and fro in their umbrageous covert below sounded not much unlike the rolling of immense stones, making every thing bend or break before them. The cracking of trees and the falling of branches, together with the hideous screams of the wounded, furnished terrifick proof of their fury, and of the havock they were making. Three out of their number were at length brought to the ground, and several others severely speared. I was frequently constrained to tremble for the safety of the pursuers, while witnessing their fearless advances towards the huge and irritated victim, seeing that a slender lance constituted the whole of their armour. To see them, in a state of perfect nudity, boldly proceeding to within reach of one of these powerful brutes, which, by a single stroke of his proboscis, might have laid them lifeless in the dust, could not but give rise to the most serious apprehensions.

Although crowds be engaged in the chase on those occasions, the law enables the man who first pierces the elephant to claim both the honour and benefit of its death. The latter, however, is but small, as he only gets one of the tusks, the chief laying claim to the other; and custom requires him to furnish a cow or an ox for slaughter at the close of the chase, which is usually concluded with mirth and festivity. Of this feast no chief, I am told, is allowed to partake, because the elephant is considered to be of equal rank with the greatest of their chiefs.

Their attack upon this noble quadruped is usually made from behind, in which position they are able for some time to elude the keen glance of his extraordinarily small eye; and sometimes even to hamstring him before he is aware of the approach of an assailant. His huge and unwieldly carcass, together with a disproportionately short neck, render him but ill able to turn quickly round upon his adversary. Of this the natives are fully aware, and advantageously avail themselves of his want of agility. When thus engaged in the act of killing him, it is not a little amusing, as well as singular, to hear them lauding the animal, and crying, "Don't kill us, great captain—don't strike or tread upon us, mighty chief;" while in the intervals between those different entreaties, they cast showers of spears into his tortured carcass. The instant he falls, all set up as loud a shout as their exhausted strength will enable them to raise. The tuft of hair on the extremity of the tail is then cut off and taken to the chief, who generally places it on a pole at the *isangue*, or entrance of his cattle-fold. It there hangs as one of the ensigns of royalty, and as a trophy of victory, achieved by his subjects over the inhabitants of the forest. The extremities of the ear and proboscis are likewise cut off, and with much ceremony deposited in some secret place, where they are left to decay; no one daring to disturb them afterward. This being done, and the tusks extracted, the remains are left to be devoured by dogs, wolves, and vultures.

ANIMALS OF SOUTH AFRICA.

It is remarkable that, notwithstanding the singular barrenness of many parts of the country, there should have been found within eight or nine degrees of latitude from the Cape point, the largest, as well as the most minute, objects in almost every class of the animal world. Thus, like the ostrich and creeper among the feathered tribes, among the beasts we have the elephant and the black-streaked mouse; the one weighing four thousand pounds, the other about the fourth part of an ounce; the camelopardalis, seventeen feet high, and the little elegant zenik, or viverra, of three inches. Here too, as above stated, is the abode of the prodigious hippopotamus, more bulky, though not so high as the elephant: and also the rhinoceros, equally ponderous and sow-like in its formation. Of the thirty different species of antelope known in natural history, this country alone possesses eighteen. Besides these, there is the largest of the eland or oreas that exists, six feet high; together with the little pigmy, or royal antelope, which is little more than six inches. The spring-bok, or leaping antelope, is, as before observed, sometimes met with in herds of four or five thousand. The lion, the leopard, the panther, and various species of the tiger-cat are likewise indigenous; but not the striped tiger of India. The wolf, hyæna, and three or four different kinds of jackals are every where found; as also the ant-eater, the iron hog, or crested porcupine, the viverra, that burrows in the ground, the jerboa, nearly allied to the kangaroo, and several species of hares. Buffaloes infest the woods and thickets; and many of the plains abound with zebras; with the stronger and more elegant-shaped quacha; as well as with whole herds of the singular knoo, partaking of the form of the ox, the horse, the antelope, and the stag. In the mountains there are numerous and large troops of that disgusting animal, the dog-faced baboon; and likewise swarms of apes and monkeys of all sizes.

REVOLUTIONARY BATTLES.

The following table may be useful for occasional reference:

Battle of Concord, April 20, 1775.
Battle of Bunker Hill, June 15, 1775.
Battle of Old Hampton, Va., where the Americans took 5 deck vessels, November, 1775.
Battle of Great Bridge, near Norfolk, Va. Dec. 18, 1775.
Battle of Fort Washington, Nov. 17, 1775.
Battle of Fort Lee, Nov. 19, 1775.
Battle of Trenton, where Washington and his army took 1000 Hessians, Dec. 26, 1776.
Battle of Princeton, Jan. 2, 1777.
Battle of Brandywine, Sept. 11, 1777.
Battle of Germantown, Oct. 4, 1777.
Burgoyne's army taken near Saratoga, Oct. 17, 1777.
Battle of Red Banks, Oct. 22, 1777.
Battle of Monmouth, June 19, 1778.
Battle of Stony Point, July 16, 1779.
Battle of Long Island, Aug. 27, 1779.
Cornwallis and his army taken at York Town, Va., Oct. 12, 1781.
Battle of King's Mountain, Oct. 1781.
Battle of Guilford, N. C., March 17, 1781.

THE WESTERN EMIGRANT.

Amid these forest shades that proudly reared
Their unshorn beauty towards the favouring skies,
An axe rang sharply. There, with vigorous arm,
Wrought a bold emigrant, while by his side
His little son with question and response
Beguiled the toil.
"Boy, thou hast never seen
Such glorious trees, and when the giant trunks
Fall, how the firm earth groans. Rememberest thou
The mighty river on whose breast we sailed
So many days on toward the setting sun?
Compared to that our own Connecticut
Is but a creeping stream."
"Father, the brook,
That by our door went singing, when I launched
My tiny boat with all the sportive boys,
When school was o'er, is dearer far to me
Than all these deep broad waters. To my eye
They are as strangers. And those little trees
My mother planted in the garden, bound,
Of our *first home*, from whence the fragrant peach
Fell in its ripening gold, were fairer sure
Than this dark forest shutting out the day."
"What, ho! my little girl," and with light step
A fairy creature hasted toward her sire,
And setting down the basket that contained
The noon's repast, looked upward to his face
With sweet, confiding smile.
"See, dearest, see
Yon bright-winged paroquet, and hear the song
Of the gay red-bird echoing through the trees,
Making rich musick. Did'st thou ever hear
In far New England such a mellow tone?"
"I had a robin that did take the crumbs
Each night and morning, and his chirping voice
Did make me joyful, as I went to tend
My snow-drops. I was always laughing there,
In that *first home*. I should be happier now,
Methinks, if I could find among these dells
The same fresh violets."

Slow night drew on,
And round the rude hut of the emigrant,
The wrathful spirit of the autumn storm
Spake bitter things. His wearied children slept,
And he, with head declined, sat listening long
To the swollen waters of the Illinois,
Dashing against their shores. Starting, he spake:
"Wife! did I see thee brush away a tear?
Say, was it so? Thy heart was with the halls
Of thy nativity. Their sparkling lights,
Carpets and sofas, and admiring guests,
Befit thee better than these rugged walls
Of shapeless logs, and this lone hermit-home."
"No, No! all was so still around, methought,
Upon my ear that echoed hymn did steal
Which 'mid the church, where erst we paid our vows,
So tuneful pealed. But tenderly thy voice
Dissolved the illusion;" and the gentle smile
Lighting her brow, the fond caress that soothed
Her waking infant, re-assured his soul
That whereso'er the pure affections dwell
And strike a healthful root, is happiness.
Placid and grateful to his rest he sank;
But dreams, those wild magicians, which do play
Such pranks when reason slumbers, tireless wrought
Their will with him. Up rose the busy mart
Of his own native city: roof and spire
All glittering bright, in fancy's frost-work ray.
Forth came remembered forms; with curving neck
The steed his boyhood nurtured, proudly neighed
The favourite dog, exulting round his feet,
Frisked, with shrill, joyous bark; familiar doors
Flew open; greeting hands with his were linked
In friendship's grasp; he heard the keen debate
From congregated haunts, where mind with mind
Doth blend and brighten; and till morning roved
'Mid the loved scenery of his father-land.

Mrs. Sigourney.

VILLAGE OF BETHANY AND DEAD SEA.

In proceeding from Jerusalem towards Bethany, the traveller skirts the mount of Olives; or, if he wishes to enjoy the magnificent view which it presents, both of the city and of the extensive tract watered by the Jordan, he ascends its heights, and at the same time inspects the remains of sacred architecture still to be seen on its summit. As he passes from the eastern gate, the Garden of Gethsemane meets his eyes, as well as the tomb which bears the name of the Blessed Virgin. This has a building over it with a pretty front, although the Grecian ornaments sculptured in marble are not in harmony with the pointed arch at the entrance. It is approached by a paved court, now a raised way, leading from the Mount of Olives over the Brook Kedron. The descent into it is formed by a handsome flight of steps composed of marble, being about fifty in number and of a noble breadth. About midway down are two arched recesses in the sides, said to contain the ashes of St. Anne, the mother of Mary, and of Joseph her husband. Reaching the bottom of the stairs, the visiter is shown the tomb of the holy Virgin herself, which is in the form of a simple bench coated with marble. Here the Greeks and Armenians say mass by turns, and near it there is an humble altar for the Syrian Christians; while opposite to it is one for the Copts, consisting of earth, and entirely destitute of lamps, pictures, covering, and every other species of ornament. Chateaubriand tells us that the Turks had a portion of this grotto: Buckingham asserts that they have no right to enter it, nor could he "learn from the keepers of the place that they ever had;" whereas the author of the Anonymous Journal, from which we have already quoted, states distinctly that "there is a place reserved for the Mussulmans to pray, which at the Virgin's Tomb one would not expect to be much in request." So much for the clashing of authorities on the part of writers who could have no wish to deceive!

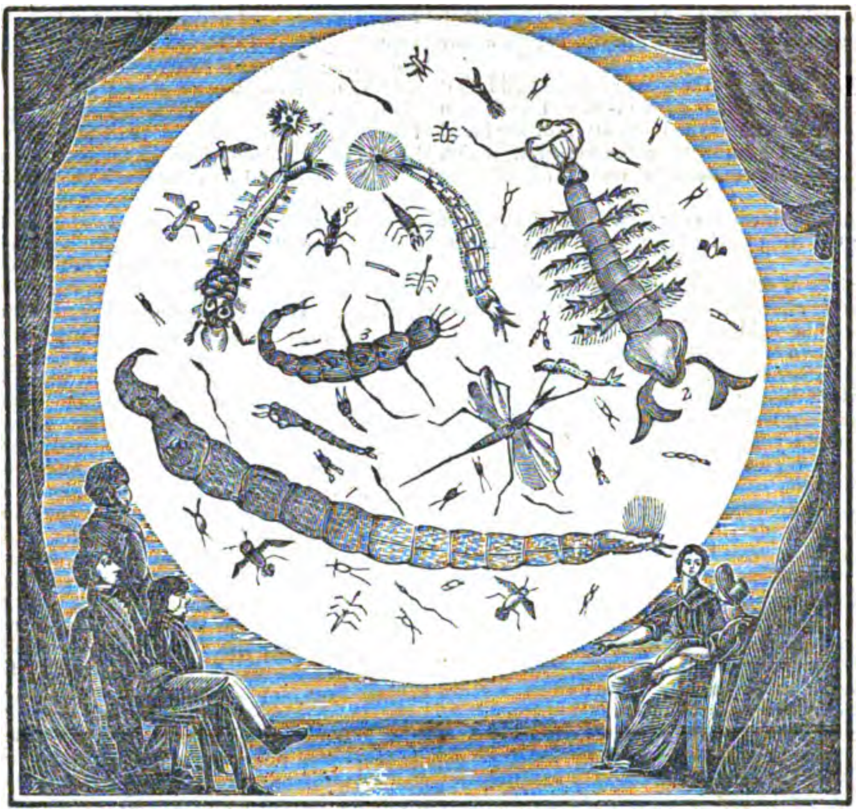
There are various other grottoes on the acclivity of the hill, meant to keep alive the remembrance of certain occurrences which are either mentioned in the gospel, or have been transmitted to the present age by oral tradition. Among these is one which is supposed to be the scene of the agony and the bloody sweat; a second, that marks the place where St. Peter and the two sons of Zebedee fell asleep when their Master retired to pray; and a third, indicating the spot whereon Judas betrayed the Son of Man with a kiss. Here also is pointed out the rock from which our Saviour predicted the sack of Jerusalem and the destruction of the Temple,—that dreadful visitation, of which the traces are still most visible both within and around the walls. The curious pilgrim is further edified by the sight of a cavern where the apostles were taught the Lord's Prayer; and of another where the same individuals at a later period met together to compose their Creed. On the principal top of the Mount of Olives,—for the elevated ground presents three separate summits,—are a mosque and the remains of a church. The former is distinguished by a lofty minaret which commands an extensive prospect; but the latter is esteemed more remarkable, as containing the piece of rock imprinted with the mark of our Saviour's foot while in the act of ascension.

But the view of the venerable metropolis itself, which stretches out its lanes and sacred enclosures under the eye of the traveller, is still more interesting than the recapitulation of ambiguous relicks. It occupies an irregular square of about two miles and a half in circumference, Eusebius gave a measurement of twenty-seven stadia, amounting to nearly a mile more than its present dimensions; a difference which can easily be explained, by adverting to the alterations made on the line of fortifications by the Saracens and Turks, especially on the north-west and western extremities of the town. Its shortest apparent side is that which faces the east, and in this is the supposed gate of the ancient Temple, shut up by the Mussulmans from a superstitious motive, and the small projecting stone on which their prophet is to sit when he shall judge the world assembled in the vale below. The southern side is exceedingly irregular, taking quite a zigzag direction; the south-western entrance being terminated by a mosque built over the supposed sepulchre of David, on the elevation of Mount Zion. The form and exact direction of the western and northern walls are not distinctly seen from the position now assumed; but every part of them appears to be a modern work, and executed at the same time. They are flanked at certain distances by square towers, and have battlements all along their summits, with loopholes for arrows or musketry close to the top. Their height is about fifty feet, but they are not surrounded by a ditch. The northern wall runs over ground which declines slightly outward; the eastern wall passes straight along the brow of Mount Moriah, with the deep valley of Jehoshaphat below; the southern wall crosses Mount Zion, with the vale of Hinnom at its feet; and the western wall is carried over a more uniform level, near the summit of the bare hills which terminate at the Jaffa gate.

Turning towards the east, the traveller sees at the foot of the hill the little village of Bethany, so often mentioned in the history of our Lord and of his personal followers; and at a greater distance, a little more on the left, he beholds the magnificent scenery of the Jordan and the Dead Sea.

There are two roads from Jerusalem to Bethany; the one passing over the Mount of Olives; the other, the shorter and easier, winding round the eastern side of it. This village is now both small and poor, the cultivation of the soil around it being very much neglected by the indolent Arabs into whose hands it has fallen. Here are shown the ruins of a house, said to have belonged to Lazarus, whom our Saviour raised from the dead; and, in the immediate neighbourhood, the faithful pilgrim is invited to devotion in a grotto, which is represented as the actual tomb wherein the miracle was performed. The dwellings of Simon the Leper, of Mary Magdalene, and of Martha are pointed out by the Mussulmans, who traffick on the credulity of ignorant Christians. Nay, they undertake to identify the spot where the barren fig-tree withered under the curse, and the place where Judas put an end to his life, oppressed by a more dreadful malediction.

Monthly Repository.



HYDRO-OXYGEN MICROSCOPE. Now Exhibiting at the American Museum.*

The above engraving is a very faithful representation of the appearance of a drop of water, as magnified by the astonishing powers of this Microscope. The images are projected upon a disk of about 240 square feet, and magnified 2,400,640 times.

The great merit and peculiarity of Dr. Weldon's Microscope, consists in the application of artificial light, instead of solar light which has been necessary hitherto, to the purposes of Microscopes. The light used in this instrument, is derived from the application of a flame of oxygen and hydrogen gas united upon lime, and is the most intense light that we are acquainted with. The union of these two flames, which suggests the name of "Hydro-Oxygen," forms the radiant point, from whence the light is collected by several lenses and projected together with the images upon the canvass. The instrument is a desirable acquisition to science, and the scenes which its immense power presents, are extremely interesting and truly wonderful. Amid the various articles on the subject, which have recently appeared, we have seen none more just than the following:

"This instrument presents to our view a world of wonders. Its magnifying powers are astonishingly great. The spectators being introduced into a room adapted to the exhibition, the doors and windows are closed to exclude the solar light: the microscope is then opened and an intense light formed by the combustion of oxygen gas, irradiates the instrument, and reflects upon a sheet of canvass of two hundred and forty feet, what we may truly call a new world. A single drop of water is magnified 2.400,640 times. In this ocean, (for such it may be called, in comparison with the incomprehensible diminutive tribes of animalculæ which teem in myriads through it) we see various species of living creatures, some apparently as large as a dog. To give an accurate description of their shape is a thing impossible. Some of them appear with horns which they bend to every shape; some seem to have but one leg and a tail, others seem to have three; some have bodies somewhat of the shape of a tadpole; others bear a distant resemblance to the porpoise; some exhibit the shape of a catfish with the head of the grass-hopper; others resemble nothing under the sun, but are wholly *sui generis*. This drop or miscropick ocean, extends its forests far and wide; amongst their wide spreading branches, those tribes of oddities, are seen gamboling, freaking, skipping, swimming. While one stands tiptoe on some lofty branch, another is seen pouncing upon him from above, and coming in contact, they glance off, one this way, the other that. Their habits appear to be wholly different from what characterizes the animals of the visible creation. They seem to be entire strangers to any social feelings: each one shuns the approach of another, and the slightest touch makes them spring and dart off, as if it were electrick.

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* See a notice of this exhibition on p. 267 of this Magazine.

The Hydrophilus, or Water Devil, as he is called, is seen darting through the ocean, devouring all before him.

The Skeleton Larvæ of the gnat is so pellucid that its whole internal structure is quite visible. The motion of the heart and lungs, and the circulation of the blood are distinctly seen, together with the muscles, which are the organs of its wonderfully rapid and peculiar motion.

The point of the finest needle looks like the end of a club, while the sting of the bee slopes off into imperceptibility.

The interstices of the finest lace appear wide enough for the body of a man to pass through them: the threads themselves are like cables.

The softest down of the thistle appears stiff and thick as the quills of a porcupine.

Who can view this astonishing display of the Divine power without being transported with wonder, love, and praise! All nature teems with God—If we extend our view to the starry regions that are above us, the mind is lost in wonder there.

The sun, which appears, (owing to the immense distance at which he is placed) but as a small object, is however, one million three hundred thousand times larger than the earth. Great as is this magnitude, its loss would be as little noticed by an intelligence that could grasp the whole creation, as the loss of a drop of water from the ocean would be noticed by our eye.

Between the two extremes stands man, with all the self-importance of monarch of this sublunary world. On viewing these microscopick myriads, imperceptible to the naked eye, this thought suggests itself to the mind—"If there were sensitive beings created by God, whose bodies bore the same relation of magnitude in regard to us, as our bodies bear with respect to the animalculæ, which we have just described, man, then in comparison to those beings, would dwindle into animalculæ unnoticed and unseen. Myriads of us then, might be inhaled into the vortex of his capacious lungs, unseen, unfelt, unknown to him.

How humiliating is the thought! and yet how true the possibility! If so diminutive are we, if so much more magnificent than the atoms that float along the air, when compared to a mere creature, however bulkier his body in regard to ours, what must we appear in that capacious eye on whose bright optick all creation is less than the point of the sting of a bee, less than imperceptibility itself!"

GREAT FASTING.

Aede kept a civet cat ten days, wild pigeons thirteen, a wild cat the same time, and an eagle twenty-eight days without food. Buffon had an eagle that lived five weeks, a badger a month, and several dogs thirty-six days without nourishment. Leewenhoeck possessed a scorpion which lived three months, and vipers ten months, in a state of perfect abstinence. Vaillant had a spider that lived ten months without food, when its strength was sufficient to kill another as large as itself.

Hunter enclosed a toad between two stone flower pots, and at the end of fourteen months it was as lively as ever. M. Sue mentions instances of the same animals living eighteen months sealed up in boxes, without nutriment. M. Herisant covered a box, containing three toads, with a coating of plaster, and on opening it eighteen months afterwards, one was still alive. Land tortoises lived eighteen months with Redi; and Baker kept a beetle in a glass confinement for three years, when it escaped. Dr. Shaw mentions two Egyptian serpents, which had been preserved for three years, in a bottle closely corked; yet when he saw them, they had cast their skins, and were as lively as if they had just been caught. Latreille stuck a spider to a piece of cork, and precluded it from communication with any thing else for four months, at the end of which time it seemed as lively as ever. Bruce kept two cerastes (horned snakes) for two years, without giving them any thing. He did not observe that they slept in the winter season; and they cast their skins, as usual, on the last day of April. In the Philadelphia Magazine for 1816, are many accounts of lizards having been found imbedded in chalk-rock, apparently dead and fossilized, which re-assumed living action on exposure to the atmosphere. On their detection in this state, says the Journal of Science, the mouth is usually closed with a glutinous substance, and closed so tenaciously, that they often die of suffocation in the very effort to extricate themselves from this material. Walker found a toad perfectly alive in the midst of a full grown elm, which had been cut down, exactly occupying the cavity which it appeared gradually to have scooped out as it grew in size, and which had not the smallest external communication by any opening that could be traced. In the Encyclo. Brit. various instances are mentioned of toads having been found alive, imbedded in the middle of trunks of trees and blocks of marble, so large and massy, that they must have been in such situations for at least a century. In making an excavation for the Hudson and Erie canal, a toad was found several feet below the surface, in the centre of a vast rock; when exposed to the air, it revived, made a few hops, and expired.

There is a singular history of Cicely de Ridgeway, preserved among the Records of the Tower of London, which states, that in the reign of Edward III., having been condemned for the murder of her husband, she remained for 40 days without either food or drink. This was ascribed to a miracle, and the king condescended in consequence to grant a pardon. The Cambridgeshire farmer's wife was buried under a snow storm, and continued twelve days without tasting any thing but a little of the snow which covered her. Dr. Eccles makes mention of a beautiful young lady, about sixteen years of age, who, in consequence of the sudden death of an indulgent father, was thrown into a state of tetanus, (a rigidity of all the muscles of the body and especially those of deglutition,) so violent as to render her incapable of swallowing for two long and distinct periods of time; in the first instance for thirty-four, and in the second, which occurred shortly afterwards, for fifty-four days: during "all which time, her first and second fastings, she declared," says Dr. Eccles, "she had no sense of hunger or thirst; and when they were over she had not lost much of her flesh." In the Phil. Trans. for 1684, is an account of four men who were compelled to subsist upon water alone for twenty-four days, in consequence of their having been buried in a deep excavation by the fall of a superincumbent stratum of earth under which they were working, and it being this length of time before they were extricated. The water which they drank of, was from a spring near at hand; and they drank of it freely, but tasted nothing else. A still more extraordinary account is recorded in the same journal for 1742, and consists of the history of a young man, who, at the age of sixteen, from having drunk very freely of cold water when in a violent perspiration, was thrown into an inflammatory fever, from which he escaped with difficulty, and with such a dislike to foods of all kinds, that for *eighteen years*, at the time this account was drawn up, he had not tasted any thing but water ! ! Hildanus assures us that Eva Flegen fasted for *sixteen years*, during which she abstained entirely from *liquids* as well as *solids ! !*

Hallet, and other physiologists, have collected various instances of a similar kind ; many of them of a much longer duration of abstinence ; but in general they are too loosely written and attested to be entitled to full reliance. Those we have given, however, have been drawn up with the most scrupulous caution, and supported by the best kind of concurrent evidence.—*N. B. Times.*

THE PASSAGE OF THE JURA. SWITZERLAND.

The Jura mountains form the imposing barrier between France and Helvetia on one hand, and Germany and Helvetia on the other. The following description of the passage of the Jura from the pen of Dr. Beattie, it is believed is not exaggerated :

The Jura, unlike the other and loftier mountains of Switzerland, is clothed from base to summit with luxuriant pine forests. Here, you observe them advancing in isolated promontories and outposts ; there, grouped into a congeries of hills, or shooting up in serrated and precipitous ridges ; but towards the base, variegated by intricate and romantick valleys, and labyrinths of rich meadow land, which give striking ornament and relief to the sombre forests in which the whole chain is enveloped. This passage of the Jura abounds in every variety of scenery ;—the simple and picturesque, the savage and the sublime, follow one another in such rapid succession, and are assembled in such remarkable juxtaposition, as to defy all description or classification. The ascent is full of interest, and the impression not a little strengthened by the sense of personal risk which the traveller must at times encounter before he can accomplish his task. Winter is the season when it is to be seen in all its wildest magnificence, for then the snow-sledges supersede almost every other vehicle of locomotion, and, preceded and followed by horses and mules in long procession, with a constant tinkling of bells, present at first sight a most novel and picturesque effect.

After pursuing for some leagues, a steep, rugged, and circuitous route, winding at one time, along a deep ravine, or the deserted bed of some ancient torrent ; at another, under the threatening verge of precipitous rocks, we reach the immediate frontiers of Helvetia.

From La Vattay, a town shut up in the deep obscurity of pine forests, and enjoying most perfect seclusion, a shelving, terraced road conducted us up the Dole,* whose isolated summit presents one of the boldest features in the Jura. Here, at an immense elevation above the valley, a new world opened upon us, and we unexpectedly found ourselves on the almost perpendicular side of the mountain. The pine-covered precipices upon which we stood gave us a full command of the wild undulating forest scenery around, which plunged, as it were, into an extensive plain, where gleaming spires, villages, and chateaux, swam beneath us like a floating cloud. Stretching away in far perspective to the shores of the Leman—from which a pale, transparent vapour crept slowly upward, dilating as it ascended—the vast forms of confused and blending mountains towered range above range in shadowy grandeur : while, loftier still, and lifted into the serene purple of an evening sky, the eternal ALPS burst suddenly upon our view, and, by an irresistible fascination, held us for a time in fixed and silent admiration.

As we descend the Jura, the scenery which characterizes the shores of the classick Leman, differs materially, and presents itself in striking and mutual contrast. On the Savoy side of the lake, it is bold, variegated, and abrupt : beetling cliffs overhang, and green promontories jut out into the lake. Terraced vineyards occupy the acclivities, and cornfields the valleys and gentler slopes ; while towns, hamlets, isolated chateaux, and villas rise in white clusters along the shore, or sprinkle the heights in picturesque and solitary beauty. Beyond these, vineyards and cornfields merge into green pastures ; the cheerful cottage is superseded by the *chalet ;* valleys are contracted into deep ravines ; orchards are succeeded by ridges of dark pines, and every thing demonstrates a new and less kindly region. Higher still, cataract and avalanche claim undisputed possession : man retires from the vain and ineffectual struggle, and the process of vegetation is suspended. The chaos of the Alps commences, and numerous *aiguilles*, stationed like advanced outposts, lead in lofty succession to the sovereign Blanc, whose unchangeable aspect presents one of the boldest emblems of eternity which the material world can supply. The opposite, or Lausanne side, exhibits nothing of this sublimity ; but it offers every combination of the beautiful and picturesque, while at the same time, it is the granary, as well as the garden, of Switzerland. From the Jura to the Lake, though comprising a distance of only three leagues, it embraces every feature that the human eye delights to contemplate—a naturally favoured, fertile, and highly cultivated soil ; an appearance of universal cheerfulness and comfort ; an industrious and healthful population, fully alive to the blessings of independence, and indefatigable in every means best calculated to render such blessings permanent.

BIOGRAPHY.

ETHAN ALLEN, BRIGADIER GENERAL U. S. A.

Ethan Allen,* was born in Roxbury, Litchfield county, Conn. in the year 1739. His parents afterwards lived in Salisbury ; at an early age he himself emigrated to Vermont. At the commencement of the disturbances in this territory about the year 1770 he took a most active part in favour of the green mountain boys, as the settlers were then called, in opposition to the government of New-York. An act of outlawry against him was passed by this state, and fifty pounds were offered for his apprehension ; but his party was too numerous and faithful to permit him to be disturbed by any apprehensions for his safety ; in all the struggles of the day he was successful ; and he not only proved a valuable friend to those whose cause he had espoused, but he was humane and generous towards those with whom he had to contend. When called to take the field, he showed himself an able leader and an intrepid soldier.

The news of the battle of Lexington determined colo-

Or *Dulay ;*—4000 ft. above Lake Geneva.

* This sketch of the life of Col. Allen, is taken from the American Biographical and Historical Dictionary, By William Allen, D. D. President of Bowdoin College—Second Edition—Boston, William Hyde & Co. 1832. 8vo. p. p. 800.—A work, by the way, that we would take occasion to recommend, as the most interesting, full and authentick of any work of its kind ever published in America. This edition contains upwards of 1800 biographical articles. This sketch of Col. Allen more nearly answers our purpose than any written one we could conveniently find : yet it is not full in its details of the difficulties of the Green Mountain Boys as to the New Hampshire Grants, with Governour Tryon, or of the highly conspicuous part which the subject of the notice took in that controversy. There are also many interesting and amusing anecdotes told of Col. Allen, which are familiar, many of them, to most people, but which we have not found time to imbody. We have been unable to procure a portrait of the Col., and indeed we are not aware that there is any extant.

nel Allen to engage on the side of his country, and inspired him with the desire of demonstrating his attachment to liberty by some bold exploit. While his mind was in this state, a plan for taking Ticonderoga and Crown Point by surprise was formed by Capts. Edward Mott and Noah Phelps of Hartford, Con. They marched privately, April 29th, with sixteen unarmed men. Arriving at Pittsfield, the residence of Col. James Easton and John Brohn, Esq.—they communicated the project to them and to Col. Ethan Allen, then at Pittsfield. These gentlemen immediately engaged to cooperate and to raise men for the purpose. Of the Berkshire men and the green mountain boys 230 were collected under the command of Allen, and proceeded to Castleton. Here he was unexpectedly joined by Col. Arnold, who had been commissioned by the Massachusetts committee to raise 400 men, and effect the same object, which was now about to be accomplished. As he had not raised the men, he was admitted to act as an assistant to Colonel Allen. They reached the lake opposite Ticonderoga Tuesday evening, May 9, 1775. With the utmost difficulty boats were procured, and eighty-three men were landed near the garrison. The approach of day rendering it dangerous to wait for the rear, it was determined immediately to proceed. The commander-in-chief now addressed his men, representing, that they had been for a number of years a scourge to arbitrary power, and famed for their valour, and concluded with saying, "I now propose to advance before you, and in person conduct you through the wicket gate, and you that will go with me voluntarily in this desperate attempt, poise your firelocks." At the head of the centre file he marched instantly to the gate, where a sentry snapped his gun at him and retreated through the covered way; he pressed forward into the fort, and formed his men on the parade in such a manner as to face two opposite barracks. Three huzzas awaked the garrison. A sentry, who asked quarter, pointed out the apartments of the commanding officer; and Allen with a drawn sword over the head of Captain De la Place, who was undressed, demanded the surrender of the fort. "By what authority do you demand it?" inquired the astonished commander. "I demand it," said Allen, "in the name of the great Jehovah and of the continental congress." The summons could not be disobeyed, and the fort with its very valuable stores and forty-nine prisoners was immediately surrendered on May 10th. There were from 112 to 120 iron cannon from six to twenty-four pounders, two brass cannon, fifty swivels, two mortars, ten tons of musket balls, three cartloads of flints, ten casks of powder, thirty new carriages, one hundred stand of small arms, thirty barrels of flour, and eighteen barrels of pork. Crown Point was taken the same day, and the capture of a sloop of war soon afterwards made Allen and his brave party complete masters of lake Champlain. May 18th Arnold with thirty-five men surprised the fort of St. John's, Canada, taking fourteen prisoners, a sloop and two brass cannon. Allen, arriving the same day with ninety men, resolved, against the advice of Arnold, to attempt to hold the place. But he was attacked the next day by a larger force from Montreal, and compelled to retreat.

In the fall 1775 he was sent twice into Canada to observe the dispositions of the people, and attach them, if possible, to the American cause. During this last tour Colonel Brown met him, and proposed an attack on Montreal in concert. The proposal was eagerly embraced, and Colonel Allen with one hundred and ten men, nearly eighty of whom were Canadians, crossed the river in the night of Sept. 24. In the morning he waited with impatience for the signal from Colonel Brown, who agreed to co-operate with him; but he waited in vain. He made a resolute defence against an attack of five-hundred men, and it was not till his own party was reduced by desertions to the number of thirty-one, and he had retreated near a mile, that he surrendered. A moment afterwards a furious savage rushed towards him, and presented his firelock with the intent of killing him. It was only by making use of the body of the officer, to whom he had given his sword, as a shield, that he escaped destruction. This rash attempt was made without authority from Gen. Schuyler. He was kept for some time in irons, and then sent to England as a prisoner, being assured that the halter would be the reward of his rebellion, when he arrived there. On his passage, handcuffed and fettered, he was shut up with his fellow prisoners in the cable tier, a space of twelve feet by ten. After his arrival about the middle of Dec. he was lodged for a short time in Pendennis castle, near Falmouth. On the 8th of Jan. 1776 he was put on board a frigate, and by a circuitous route carried to Halifax. Here he remained confined in the jail from June to October, when he was removed to New-York. During the passage to this place, Captain Burke, a daring prisoner, proposed to kill the British captain and seize the frigate; but Colonel Allen refused to engage in the plot, and was probably the means of preserving the life of Capt. Smith, who had treated him very politely. He was kept at New-York about a year and a half, sometimes imprisoned, and sometimes permitted to be on parole. While here, he had an opportunity to observe the inhuman manner, in which the American prisoners were treated. In one of the churches, in which they were crowded, he saw seven lying dead at one time, and others biting pieces of chips from hunger. He calculated, that of the prisoners taken at Long Island and Fort Washington, near two thousand perished by hunger and cold, or in consequence of diseases occasioned by the impurity of their prisons.

Col. Allen was exchanged for Col. Campbell, May 6, 1778, and after having repaired to head quarters, and offered his services to General Washington in case his health should be restored, he returned to Vermont. His arrival on the evening of the last of May gave his friends great joy, and it was announced by the discharge of cannon. As an expression of confidence in his patriotism and military talents he was very soon appointed to the command of the state militia. It does not appear, however, that his intrepidity was ever again brought to the test, though his patriotism was tried by an unsuccessful attempt of the British to bribe him to effect a union of Vermont with Canada. Sir H. Clinton wrote to lord Germaine, Feb. 1781; "there is every reason to suppose, that Ethan Allen has quitted the rebel cause." He died suddenly at his estate in Colchester, Feb. 12, 1789. His daughter Pamela married E. W. Keyes, Esq. in 1803. Another daughter entered a nunnery in Canada. He had lived for a time in Sunderland. It was his project to make a city Vergennes, a mile square.

General Allen possessed strong powers of mind, but they never felt the influence of education. Though he was brave, humane, and generous; yet his conduct does not seem to have been much influenced by considerations respecting that holy and merciful Being, whose character and whose commands are disclosed to us in the scriptures. His notions with regard to religion were such, as to prove that they, who rather confide in their own wisdom than seek instruction from heaven, may embrace absurdities, which would disgrace the understanding of a child. He believed, with Pythagoras, that man after death would transmigrate into beasts, birds, fishes, reptiles, &c., and often informed his friends, that he himself expected to live again in the form of a large white horse.

The following anecdote shows, that he did not hold his strange opinions very strongly. Being called to the chamber of a dying daughter, who had been instructed in the principles of Christianity by his pious wife, she said to him, "I am about to die; shall I believe in the principles you have taught me, or shall I believe in what my mother has taught me?" He became agitated; his chin quivered; his whole frame shook; and he replied; "believe what your mother has taught you."

Besides a number of pamphlets in the controversy with New-York, he published in 1779 a narrative of his observations during his captivity, which was afterwards reprinted; a vindication of the opposition of the inhabitants of Vt. to the government of New-York, and their right to form an independent state, 1779; and Allen's theology, or the oracles of reason, 1786. This last work was intended to ridicule the doctrine of Moses and the prophets. It would be unjust to bring against it the charge of having effected great mischief in the world, for few have had the patience to read it.

He died of apoplexy. A plain marble slab covers his remains, on which is the following inscription:

THE
CORPOREAL PART
OF
GEN. ETHAN ALLEN,
Rests beneath this stone,
The 12th day of February, 1789
Aged 50 years.
His spirit tried the mercies of his God,
In whom he believed, and strongly trusted.

CHINESE PUNISHMENTS, No. 2.

A CULPRIT CONVEYED TO PRISON.

When the mandarin has condemned the culprit, an iron chain, fastened by a padlock, is put round his neck, and he is then dragged to his cell. If he refuses to proceed, inferiour officers of justice compel him after the manner illustrated by the engraving.

BATTLE BETWEEN THE INDIANS AND POLES.

It appears from a letter received this week from a respectable Polish emigrant, at New Orleans, that about twenty of his countrymen, not meeting with any means of support, and totally without funds, departed from New Orleans for Mexico, by land, through the Texas country. Having no guide, nor knowledge of the wilderness route, they became utterly lost, when they were fiercely attacked by a numerous body of Indians. The Poles had but few guns, but maintained a long and bloody conflict, until they had killed a large number of their enemy. They, however suffered severely, having had two of their number slain, and the remainder wounded. Only one Pole was able to reach New Orleans.—*Louisville Journal.*

CURIOUS EPITAPH.

The following is a copy of the inscription on the tombstone of William French, who was massacred by the King's men at Westminster, in the New Hampshire Grants, just before the battle of Lexington.

"In Memory of William French
Son of Mr. Nathaniel French Who

Was shot at Westminster March y^{e} 13th
1775 by the hands of Cruel Ministereal

tools of Georg y^{e} 3^{d} in the Corthouse at
a 11 a Clock at Night in the 22^{d} year of
his age—

Here William French His Body lies
For Murder his blood for Vengeance cries
King Georg the third his Tory crew
tha with a bawl his head Shot threw
For Liberty and his Countrys Good
he Lost his Life his Dearest blood."

PROPENSITY OF BIRDS.—At the recent fire in Spring street, a covey of pigeons was observed hovering over the flames at a great height, presenting a beautiful appearance, resembling that of gold, caused by the reflection of the light below. For several minutes they were seen darting in every direction, as if at a loss where to wend their passage. At last they were noticed to follow the propensity ascribed to birds by naturalists, and plunged one by one, into the flames, where they perished.—*N. Y. Com. Adv.*

A JUST SENTIMENT HAPPILY EXPRESSED.—"Whether I shall ever succeed in being useful," said Dacre, "is, I fear, very doubtful, but I have determined not to be idle. *A lonely man like me cannot afford to despise himself.*"

ITEMS OF INTELLIGENCE.

Equity according to Grotius is the correction of that wherein the law (by reason of its universality) is deficient.

The whole number of bills in Chancery filed in the state of New York, during the year 1834, was 1,932; of which 430 were filed before the Chancellor, and the residue before the several Vice-Chancellors: and the number of appeals to the Chancellor from the decisions of Vice-Chancellors, was 88. The number of special motions and applications, some of which involve important questions of law, requiring time for decision was 2,417. The number of decrees, special orders and decisions, exclusive of orders of course 3,350.

From the Report of the Director of the mint, it appears that within the year 1834, the coinage amounted to $7,388,423; of which $3,954,270 were in gold coins, $3,415,002 in silver, and $19,151 in copper—in all 11,637,648 pieces of coin.

The Legislature of Alabama has passed a law prohibiting the issue of bank bills under $5 in that state.

A stupendous rock weighing upwards of 300 tons, lately fell from a precipice upon the village of Aravedra, near Peru S. A. and crushed twenty-three men, women and children. Upwards of ninety horses and a great many sheep, pigs, and cows were also buried under the ruins.

At Polock, in Lithuania, at the end of October, a man died aged 188! At 93 he married his third wife, who lived 50 years with him, and bore him several children.

A person in Connecticut has invented a machine for catching shad by steam. The engine is to be placed on the shore, and to be used for drawing in the seine. It is intended for fishing in North Carolina, where catching shad is a very extensive business, and for three or four months employs a great number of negroes, at a considerable expense.

The Militia of the United States, according to the latest returns, comprises 1,336,829 men.

It appears by the annual message of the Governour, that the income of the two State Prisons at Auburn and at Mount Pleasant, over their ordinary expenses exclusive of the support of the female convicts, was $23,892 42, for the last fiscal year; and over all expenses, ordinary and extraordinary, *six thousand seven hundred and sixteen dollars and forty-two cents.*

The news of the recall of M. Serrurier the French Minister, from Washington, by the government of Louis Philip, was received in New York, the 18th Feb., 1835.

An attempt was made to assassinate Gen. Jackson, President of the United States, on the 30th. Jan. 1835 by one Richard Lawrence, by snapping two percussion pistols at his breast, as he was leaving the Rotunda of the Capitol, at the funeral of Warren R. Davis, M. C.

LICENSE LAWS.

BY REV. JOHN PIERPONT.

'We license thee, for so much gold,'
  Said they who filled St. Peter's chair
To put away the wife who's old,
  And take one that is young and fair:—
For *publick good requires* a dome
To swell, like heaven's, for us at ROME.'

'For so much gold, we license thee,'
  So say our laws—'a draught to sell,
That bows the strong, enslaves the free,
  And opens wide the gate of hell.
For *publick good requires* that some,
Since many die, should live by RUM.'

Ye civil Fathers! while the foes
  Of this Destroyer seize their swords,
And heaven's own hail is in the blows
  They're dealing—will YE cut the cords
That round the falling Fiend they draw,
And o'er him hold your shield of law?

And will ye give to man a bill
  Divorcing him from Heaven's high sway,
And, while God says 'thou shalt not kill'—
  Say ye, 'for gold, ye may—ye may'?
Compare the body with the soul!
Compare the bullet with the bowl!

In which is felt the fiercer blast
  Of the destroying Angel's breath?
Which binds its victim the more fast?
  Which kills him with the deadlier death?
Will ye the felon fox restrain,
And yet take off the tiger's chain?

The living to the rotting dead
  The God-contemning Tuscan* tied,
Till by the way, or on his bed,
  The poor corpse carrier dropped and died—
Lashed hand to hand, and face to face,
In fatal and in loathed embrace.

Less cutting, think ye, is the thong
  That to a *breathing* corpse, for life,
Lashes, in torture loathed and long,
  The drunkard's child—the drunkard's wife
To clasp *that* clay—to breathe that breath—
And no escape!—O, that is death!

Are ye *not* fathers? When your sons
  Look to you for their daily bread,
Dare ye, in mockery, load with stones
  The table that for them ye spread?
How can ye hope your sons will live,
If ye, for fish, a serpent give!

O, Holy God! let light divine
  Break forth more broadly from above,
Till we conform our laws to thine;—
  The perfect law of truth and love:
For truth and love alone can save
Thy children from a hopeless grave.—*Boston Mer. Jour*

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*Mezentius. See Virgil, Æneid, viii. 481—491.

NOTICES.

"The Elements of Natural and Experimental Philosophy; including Physics, Dynamics, Mechanics, Hydrostatics, Hydraulics, Pneumatics, Acoustics, Optics, Electricity, Galvanism, Magnetism, and Astronomy. According to the latest discoveries, illustrated by nearly one hundred engravings. By Rev. David Blair, A. M. Revised, corrected, newly arranged, and greatly improved and enlarged, with many useful and important additions, illustrations, experiments, observations, &c. By E. A. Smith. New York: M'Elrath & Bangs, 1834. 12mo. pp. 288." This little elementary work, whose title above given sufficiently explains its nature and object, is excellently well adapted to the business of schools, and is a desirable auxiliary to the labours of instructers, to whom we recommend it with confidence. The subjects are well arranged and clearly illustrated.

"Elements of Chemistry, illustrated by more than one hundred engravings. Designed especially for the use of schools and academies. By L. D. Gale, M. D. New York: M'Elrath & Bangs, 1835. 12mo. pp. 323." This book, which comes from the same press, surpasses every elementary work on Chemistry designed for similar purposes, that we have seen. Dr. Gale, whose experience entitles him to confidence, treats the subject in that popular and attractive manner, which cannot fail to interest beginners in a science which has hitherto been treated of with such prolixity and elaborateness, as to discourage young persons from the laborious attempt of fathoming its intricate truths. The wants of pupils and teachers in this respect, this book is intended to supply. The experiments are simple, and by the aid of the many useful engravings are easily comprehended.

"The Religious Magazine. Origen Bacheler, Editor. No. 1, January, 1835. Royal 8vo. pp. 64." The former enterprising editor of the Family Magazine has again appeared before the world at the head of a new magazine, of the above title and dimensions. His plan is to furnish a system of standard religious knowledge, admitting that variety of religious subjects and religious discussions which will be calculated to suit all tastes, and all denominations. It is got up on very good material, and each number is to be adorned with engravings, and a piece of devotional musick. The plan is a good one, and should not fail to recommend itself to the patronage and confidence of the religious community. It is issued monthly. Subscription price $3 per annum.

"The Western Monthly Magazine, a continuation of the Illinois Monthly Magazine. Conducted by James Hall. Vol. 3." This Magazine is conducted with taste and talent. The leading articles are written with highly creditable energy and excellent spirit. The critical notices are just and discriminating. It is published monthly, at Cincinnati, O.—Each number contains upwards of 50 pages. Subscriptions received at this office, where specimen numbers may be seen. Price $3, in advance.

SECTION XXXI.

HISTORY.

In concluding this volume, we are constrained to remark, that the subject of Universal History from the beginning of the world, has been attended with difficulty as to the collection of details. The history of nations in their primitive simplicity, unsettled and almost uncivilized is necessarily involved in much darkness, from the deficiency of intelligent historians in those periods, and the confusion and frequent discrepancy in the writings of those historians who came afterwards. We have thus far, however, availed ourselves of all the histories within our reach, and have tolerably succeeded in giving a concise history of most nations, endeavouring as much as possible to reconcile palpable discrepancies wherever they have occurred, and furnishing a result as near the truth as it was possible for us to render it. From the period to which we have arrived, however, the year 1004 B. C. we shall be able to pursue the subject with more fulness of detail, greater cartainty of truth, and of course, as we reach more important events, with an increasing interest. The nations thus far noticed, are, China, Babylonia, Assyria, Canaan, the Israelites, the Moabites, the Ammonites, Idumæa, Egypt, Palestine, Phœnicia, Greece, Lydia and Italy. We shall conclude the subject for the present, with a recapitulation of the history of the distinguished characters, in the period extending from 1491 to 1004 B. C.

"Moses, the first Hebrew lawgiver and leader. Joshua, a conqueror of Canaan, and pious military chieftain. Orpheus, the father of poetry. Musæus, a Greek poet. Samson, a judge of Israel, and endowed with extraordinary strength. Sanconiathon, a Phœnician, one of the earliest writers of History. David, a king of Israel, a warrior and poet.

Moses, when an infant, having been exposed on the brink of the river Nile, in an ark of bulrushes, the daughter of Pharaoh found the ark, saved the child, and had him educated as her own son. At forty years of age, having renounced the honours of Pharaoh's court, he endeavoured to join his oppressed countrymen, but they would not receive him. After this, circumstances induced him to flee to the land of Midian, where he married, and enjoyed a retirement of forty years.

At the end of this period, God appeared to him in the mount of Horeb, and ordered him to return to Egypt, with a commission to Pharaoh, respecting his release of the Israelites from bondage. He accomplished this object only after the infliction of ten severe and awful plagues upon that monarch and his people. At length God saw fit, through Moses, to destroy Pharaoh and the flower of his military force in the Red Sea.

From this period, Moses was employed in receiving the moral law from Mount Sinai, in prescribing the form of the ceremonial worship of the Hebrews, in regulating their civil polity, in conducting their military operations, and in leading them through the wilderness of Sinai, in which they were doomed to wander during forty years.

At the age of 120 he died on mount Nebo, in the land of Moab, having first taken a view of the promised land. This occurred 1451 years B. C. Moses was a man of eminent piety and wisdom.

Joshua was the successor of Moses, and led the Israelites into the promised land, over the river Jordan, whose waters divided to afford them a passage. The first city which he conquered was Jericho; this was followed by the speedy reduction of thirty others.

Having divided the land of Canaan among the ten tribes, Joshua died, aged 110, 1426 years B. C.

Orpheus was the son of Œager, or, as some say, of Apollo, by Calliope. The fictions of poetry have put into his hands a lyre, whose entrancing sounds stayed the courses of rivers, moved mountains, and subdued the ferocity of wild beasts. Doubtless the effects of his song, though not of such a nature, were considerable, in that rude and early age, on the minds of untutored barbarians.

By the power of his musick, as fiction reports, he regained his wife, Eurydice, from the infernal regions, but lost her again in consequence of failing to comply with a certain condition, on which she to be was restored. The condition was, that he should not look behind to see her till he had come to the extremest borders of hell. Contrary to promise he did this, through the impatience of love, or by reason of forgetfulness, and she vanished from before his eyes.

Orpheus, according to story, was one of the Argonauts; of which celebrated expedition he wrote a poetical account. This, however, is doubted; and the poems that pass under his name, are, with reason, ascribed to other and later writers. There is little cause to doubt that such a person as Orpheus existed, and that he was a great poet and musician. The period assigned for him is 1284 years B. C.

Musæus is supposed to have been a son or disciple of Linus or Orpheus, and to have lived about 1253 years before the Christian era. None of his poems remain. A Musæus, who flourished in the 4th century, according to the judgement of most criticks, wrote "The loves of Leander and Hero."

Samson was the son of Manoah, of the tribe of Dan. As he was raised up to avenge the Israelites of their oppressors, he was endowed with extraordinary strength. On one occasion, he slew 1000 Philistines with the jaw-bone of an ass. At various other times, he severely molested and distressed them.

At length he was, through stratagem, betrayed by Delilah, and deprived of his strength. It, however, soon returned; and he pulled down the temple of Dagon on the heads of his enemies, the Philistines, with whom he perished in the general ruin. Some parts of his character are very far from deserving imitation. His various exploits and follies, are recorded, Judges xiv. xv. xvi.

Sanconiathon was born at Berytus, or, according to others, at Tyre. He flourished about 1040 years B. C. He wrote, in the language of his country, a history, in nine books, in which he amply treated of the theology and antiquities of Phœnicia and the neighbouring places.

This history was translated into Greek by Philo, a native of Byblus, who lived in the reign of the emperour Adrian. Some few fragments of this Greek translation are extant. Some, however, suppose them to be spurious, while others maintain their authenticity.

David was the son of Jesse, and anointed king of Israel, while keeping his father's flocks, by Samuel, the prophet. He was a valiant, prosperous, and warlike prince, and raised himself and people to great eminence and renown. His name began to be known and celebrated, from the time that he slew Goliath, the giant. His military operations were planned with wisdom, and executed with vigour.

He was distinguished as a sacred poet and writer of psalms; no one in this department has ever equalled him. These inspired productions are marked by loftiness, vigour, and felicity of expression—abounding in the sublimest strains of devotion, and conveying the most important truths and instructions to the mind.

This pious prince was left to fall into scandalous sins, in a few instances, particularly in the seduction of Bathsheba, and the murder of Uriah, her husband; but he bitterly repented of them, and was restored to the divine favour. He died, 1015 years B. C., after a reign of forty years.

This brings us down to PERIOD V, which is the Period of Homer, extending from the dedication of Solomon's temple, 1004 B. C., to the founding of Rome, 752 years B. C."

ASTRONOMY.

ITS HISTORY—Continued.

Manilius, a Roman, A. D. 10, wrote an astronomical and astrological poem.

Seneca, A. D. 50. His book on natural philosophy contains many pieces of information on astronomical history, but is principally remarkable for his bold opinions on the nature of comets. These he declares to be planets, whose laws he predicted would one day be calculated, and that posterity would wonder how things so simple could have so long escaped notice.

Menelaus, A. D. 80, has left three books of spherical trigonometry.

Theon of Smyrna, A. D. 117? wrote on astronomy, and made a collection of astronomical works. His observations are cited by Ptolemy.

Cleomedes wrote on astronomy. He certainly lived after Posidonius, but whether before or after Ptolemy is uncertain. He is usually considered as having lived under Augustus Cæsar.

We must suppose that there were many real observers between the epochs of Hipparchus and Ptolemy; but from the loss of even their names, and the silence of Ptolemy himself, it is clear that no discovery of any importance was made.

Ptolemy of Alexandria, A. D. 130—150. We must briefly mention his works, his system, and his discoveries. The *mathematical collection*, called by the Arabs, the *Almagest* is the work from which we derive most of our knowledge of the Greek astronomy. We find there a full account of the observations and discoveries of Hipparchus; those of Ptolemy himself; the reasons and elements of his system; various mechanical arguments against the motion of the earth, which show that the first principles of dynamicks were utterly unknown; a description of the heavens and the milky way, and a catalogue of stars, which we may be nearly certain was that of Hipparchus, reduced to his own time by an assumed value for the precession, but which has been asserted to have been corrected by new observations; a theory of the planetary motions; the length of the year; the instruments he employed, &c.

The Ptolemaick system was an attempt to represent the motions of the planets by supposing them to move uniformly in circles, the centres of which circles themselves moved uniformly in circles round the earth. The angular motions of the planets, as then known, were sufficiently well represented by this system; not so their changes of distance from the earth, as seen in their apparent diameters. This was the universal system of after-times till Copernicus.

The principal discovery of Ptolemy is that of the LUNAR EVECTION, an inequality such as would be caused by an alternate increase and diminution of the eccentricity of the moon's orbit. He also discovered the REFRACTION and made some tolerably correct experiments to determine its law. He explained the apparent enlargement of the disks of the sun and moon when near the horizon. He extended the projection of the sphere of Hipparchus. He entered into the investigation of every point which Hipparchus had touched; in some instances finding more correct values; in others, altering without amending. He was not an astronomer only, but wrote on geography, musick, chronology, mechanicks, and, unfortunately, on astrology.

With Ptolemy the originality of the Greek school ends. We must come to the Arabs before we find any thing worth particular notice.

Sextus Empiricus, A. D. 173, described and wrote against the Chaldean astrology.

Censorinus, A. D. 238, wrote an astrological work on the day of nativity, containing historical information with regard to astronomy.

Julius Firmicus Maternus, A. D. 370 wrote on astronomy.

Pappus of Alexandria, A. D. 383. His commentary on Ptolemy is nearly all lost.

Theon of Alexandria, A. D. 385, the most celebrated commentator on Ptolemy. He was a good mathematician, but no great astronomer. He has however left some tables, and a method for constructing almanacks.

Hypatia (his daughter,) murdered A. D. 415, the first female on record celebrated for her scientifick talents. She wrote one book of her father's commentary, and constructed some tables.

Martianus Capella, A. D. 470, in his *Satyricon*, has some astronomical notions, among which is the following: that Mercury and Venus move round the sun. Cicero and Macrobius give the same idea; but the passage of Martianus is remarkable as being reported to have turned the attention of Copernicus to the system which bears his name.

Thius of Athens, A. D. 500, has left six observations of lunar occultations and solstices: *the only observations recorded between Ptolemy and the Arabs.*

Simplicius, A. D. 546, has left a commentary on, and description of, the astronomical work of Aristotle, which we have mentioned as lost.

Proclus Diadochus (not the commentator of Euclid,) A. D. 550, wrote a commentary on the astrology of Aristotle, and a description of astronomical phenomena.

Isidore, archbishop of Hispalis (Seville,) A. D. 636, wrote a theological work on astronomy.

Bede, A. D. 720, and *Barlaam* the monk, A. D. 1330, are attached to the preceding by Delambre. Both wrote astronomical works of little distinct merit. The last Greek writer on astronomy, of the least note, is *Michel Psellus*, A. D. 1050.

It is remarkable that, excepting his own commentators, few of the authors immediately preceding ever quote Ptolemy. Had it not been for the Arabs, the writings of the latter must have been lost.

The Alexandrian school was destroyed by the Saracens under Omar, A. D. 640; and the rise of astronomy among the eastern Saracens dates from the building of Bagdad by the caliph Al Mansur, in the year 762. In the reign of this prince, translations of the Greek writers were begun; and with nearly the same instruments, and the same theory, as Ptolemy, a career of four centuries of observation commenced, during which many astronomical elements, and, in particular, the obliquity of the ecliptick, and the precession of the equinoxes, were more accurately determined.

In the reign of Al Mamun, son of Harun al Rashid, himself a diligent observer, great encouragement was given to astronomy. A degree of the meridian was measured, but with what accuracy cannot be known, from our ignorance of the measure employed.

Albategnius, or *Al-Batani*, A. D. 880, discovered the motion of the solar apogee, corrected the value of the precession, the solar eccentricity, and the obliquity of the ecliptick; and published tables. He is the first who made use of sines (instead of chords) and versed sines. He found the length of the year more accurately. He is, beyond all doubt, the only distinguished observer of whom we know any thing between Hipparchus and Tycho Brahe.

Alfraganus or *Al-Fergani*, and *Thabet ben Korrah*, both about A. D. 950. The first has left a work on astronomy; the second is principally remarkable by his having revived an old notion of the Greeks (not mentioned by Ptolemy, but by Theon) of a variation in the position of the ecliptick, which has been called a *trepidation*.

Ebn Yunis, and *Abul-Wefa*, about A. D. 1000. The former, an Egyptian, an observer and mathematician of great merit, has left a work containing tables and observations. He first noted the time of the beginning and end of an eclipse by taking the altitude of a star. His work shows an increasing knowledge of trigonometry. He was the first who employed subsidiary angles. Abul-Wefa first formally used tangents, cotangents, and secants, which Albategnius had overlooked. He gave tables of tangents and cotangents.

Alphetragius of Morocco, A. D. 1050, attempted a new explanation of the planetary motions, not worthy of further notice.

Arsachel, a Spanish Moor, A. D. 1080 has left some tables of indifferent accuracy. His contemporary, *Alhazen*, wrote on refraction. *Geber*, also a Spaniard, (about A. D. 1080 ?) made some improvements in spherical trigonometry. He introduced the use of the cosine.

Abul Hassan about A. D. 1200, has left a catalogue of stars, and some improvements in dialling.

We have Persian tables (of the eleventh century ?) translated by George Chrysococca, a Greek physician, in the fourteenth century; but the best known are those of Nasireddin, published A. D. 1270, under the protection of Hulagu, grandson of Jenghis Khan, and conqueror of Persia. The Persians have a method of intercalating their solar years, which, though complicated, is of surprising accuracy, but when they first began to employ it is unknown.

Ulug Beg, grandson of Timur, A. D. 1433. This prince made a large number of observations at Samarcand. His catalogue of stars of the date above-mentioned, was, in its day, the most correct ever published. He also gave tables of geographical latitudes and longitudes. The emperour Akbar (sixth from Timur, died 1605) also encouraged astronomy, and caused many Hindoo works to be translated into Persian.

In China, *Cocheou-King*, A. D. 1280, patronised by Kublai, brother of Hulagu, and fifth successor of Jenghis Khan in the partial conquest which that prince made of China, made a great number of good observations. He introduced spherical trigonometry, and rejected the ancient chronology.

Since the fifteenth century, astronomy has declined throughout the East. The Chinese received many methods from the Jesuits, but to little purpose. Among the Hindoos, there are very few who can understand the ancient writings. The Turks and Persians have little besides astrology. We now proceed with European astronomy which forms a chain of progressive improvement.

Astronomy was introduced again into Europe by means of the Greek writers, mostly through translations from the Arabick. The first translation of the *Almagest* was made under the auspices of the Emperour Frederick II., about A. D. 1230.

Sacrobosco (an Englishman named *Holywood*,) A. D. 1220, wrote a work on the sphere, taken from Ptolemy, &c. It continued for a long time in great repute. He also wrote on the Calendar. About the same time, *Jordanus*, wrote a curious work on the Planisphere.

Alonso X., king of Castile, A. D. 1252, with the assistance of Arabs and Jews, formed the first European tables. They differ little from those of Ptolemy.

Roger Bacon, A. D. 1255, wrote on the phenomena of astronomy. (For writers of this period, not worth naming, see Delambre, *Hist. Ast. Moy.* pp. 258, 444.)

The Cardinal *Cusa*, A. D. 1440, wrote on the correction of the Calendar. He is said to have maintained the motion of the earth.

George Purbach, A. D. 1460, extended trigonometrical tables, and published a theory of the planets based on that of Ptolemy.

John Muller, called *Regiomontanus*, (died A. D. 1476,) made an abridgment of the *Almagest*, published more extensive trigonometrical tables, extended various parts of trigonometry, and was an observer, though not, in this respect, superiour to some of the Arabs. His almanacks were the first which were worthy of the name, and were in great repute.

The two last-mentioned writers deserve some special notice, though it cannot be said that they made any direct advances either in theory or observation. Their writings, and the facilities afforded by their tables, undoubtedly did much to promote a taste for astronomy.

George of Trebizond, called *Trapezentius*, who died A. D. 1486, first translated the Almagest *from the Greek* into Latin.

Bianchini, A. D. 1495, published tables similar to those of Alonso.

Walthereus, died A. D. 1504, a pupil of Regiomontanus, made numerous observations, which were often reprinted.

The following names are inserted that the reader may know to what names to refer for the astronomy of the time immediately preceding the promulgation of the system of Copernicus. Except in this point of view, there is but little interest attached to their labours:—

Riccius, A. D. 1521, wrote a book on astronomy, containing much historical discussion.

Werner (died A. D. 1528) gave a more correct value of the precession.

Stoffler (died about A. D. 1531) published almanacks for fifty years; wrote on the astrolabe, &c.

Munster (died A. D. 1552) wrote on clocks and dials.

Fracastorius (died A.D. 1543,) wrote on the heavenly motions.

In 1528, *Fernel*, who died in 1558, gave a very correct measure of a degree of the meridian, from such insufficient observations, that, as Delambre remarks, the correctness must have been accidental.

Copernicus, born 1473, died 1543. Applied himself to astronomy from A. D. 1500. In 1530, he had finished his tables of the planets, and his work *On the Revolutions of the Heavenly Bodies*, containing an explanation of the Copernican system, which, it is almost unnecessary to say, was a revival of the opinions of the Pythagorian school on the motion of the earth. It was published in 1543, and its author died immediately afterwards. Copernicus improved the lunar tables, and gave, to a considerable extent, an explanation of celestial phenomena upon his own system. His book is a mixture of his own original and sagacious notions and of the old philosophy; and he was far from being able to answer the mechanical objections of his time. What might have struck so bold a thinker, had he lived to face opposition, cannot be told; but as the history stands we shall come to the time of

Galileo before we find all objections satisfactorily answered.

From this period, at which the preservation of printed works commences, our limits will not permit our giving more than the names of many astronomers. The following is the list of those who are worth mention between Copernicus and the death of Tycho Brahe; the dates are generally those of death, but where that is not known, the date in brackets is that of the publication of some work.

Copernicus	1543
Apian	1552
Gauricus	(1552)
Reinhold	1553
Piccolomini	1553
Orontius Fineus	1555
Gemma Frisius	1555
Royas	(1555)
Bassantin	1557
Recorde	1558
Carelli	1558
Vinet	1564
Benedict	(1574)
Maurolicus	1575
Rheticus	1576
Nonius	1577
Vigenera	(1578)
Stadt	1579
Schrekenfuchsius	1579
Bressius	1581
John of Padua	1582
Raimar	(1588)
Schoner	1590
Mœstlinus	1590
William, Landgrave of Hesse Cassel	1592
Mercator, G.	1594
Digges	1595
Rothman	1596
Galucci	(1597)
Pini	1598
Tycho Brahe	1601

Of these must be mentioned—

Reinhold, the friend of Copernicus, and advocate of his doctrines, who formed the PRUTENICK TABLES.

Recorde, who wrote the first *English* treatise on the celestial phenomena.

Rheticus, editor of the *Opus Palatinum*, a large trigonometrical table.

Maurolicus, author and editor of several works and tables.

Nonius, inventor of an ingenious method of division of the circle, which has often caused it to be supposed that he anticipated the invention of Vernier.

Mercator (*Gerard*,) who gave the first idea of the projection known by his name.

Up to this time, the means of observation had been undergoing gradual improvement, more by attention to the construction of the elder instruments, than by the introduction of any new principle. The Copernican theory had its advocates, but was not yet adopted by many. Algebra had been introduced into most parts of Europe, but was not yet in a state to furnish much assistance in trigonometry. Logarithms were not yet invented, nor do we find the *instruments* fixed in the *meridian*, the *telescope*, or the *pendulum clock*. The first *observer*, who made any important additions to the phenomena of the heavens as received from the Arabs, was Tycho Brahe, to whom we now come.

Tycho Brahe, born 1546, began to study astronomy 1560; commenced his observations at Hoene, an island near Copenhagen, 1582; was driven from thence, 1597; died 1601. He made a catalogue of the fixed stars, more accurate than any which preceded: gave the first table of refractions: discovered the *variation* and *annual equation* of the moon, the variation of the motion of her nodes, and of the inclination of her orbit, and that of the obliquity of the ecliptick. What was essentially as great a service as any of the preceding, he discarded the *trepidation* of the precession, already mentioned, which had more or less infected all tables up to his time; he also ascertained that comets (those of his day, of course) were further removed from the earth than the moon; in fact, that they had no parallax which his instruments could discover, thus refuting the notion that they were atmospherick bodies. He greatly improved and extended the instruments in use as well as all the methods of observation.

Tycho Brahe did not admit the Copernican theory; but substituted for it one of his own, usually known by the name of the *Tychonick system*. This consisted in supposing the sun to move round the earth, but all the other planets to move round the sun, being also carried with it round the earth. This system explains all the appearances as well as that of Copernicus; and we must say, that by this means the *then* unanswerable arguments against the Copernican system were avoided. In fact, there is nothing but the *aberration of light* (a comparatively recent discovery,) which is demonstrably conclusive in favour of the motion of the earth. The system of Tycho is said to have been promulgated by some of the ancients, at least with regard to the inferiour planets.

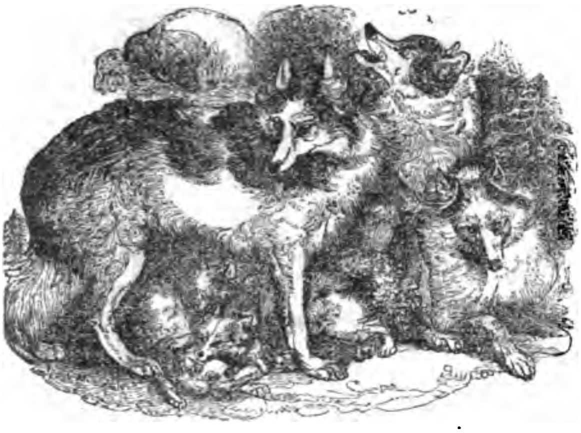
The reformation (as it was called) of the calendar took place in 1582, under Pope Gregory XIII.

From the time of the death of Tycho Brahe, to that of Newton, which forms the next great epoch in the history of astronomy, we can only dwell generally on a few leading discoveries. To enable the reader to search further, we give a table of all the names between the deaths of Tycho Brahe and Newton which Delambre has thought worthy of any mention, with some few additions. The names mentioned from 1581, to 1727, which are not in this list, will be found in the next. The year of death is given opposite to each name; or where that is not known, the year of some publication is given in brackets. The dates are principally from Weidler, and several from Delambre, compared with those in the first edition of Lalande's astronomy.

Tycho Brahe	1601
Bayer	(1603)
Vieta	1603
Nunez	(1605)
Scaliger, Jo.	1609
Clavius	1612
Pitiscus	1613
Calvisius	1615
J. B. Porta	1615
Wright	1615
Fabricius	1616
Magini	1617
Napier	1617
Ursinus	(1619)
Tarde	(1620)
Marius	1624
Adr. Romanus	1625
Gunter	1626
Snellius	1626
Wendelinus	(1626)
Blaeu	(1628)
Vlacq	(1628)
Briggs	1630
Malapertius	1630
Vernier	(1631)
Kepler	1631
Lansberg	1632
Stevinus	1633
Bartschius	1633
Byrge	1633
Norwood	(1633)
Habrecht	1634
Metius	1635
Schickhardt	1635
Peyresc	1637
Reinerius	1639
Horrox	1641
Crabtree	1641
Galileo	1642
Gascoyne	1644
Herigonius	(1644)
Langrenus	1644
Bartoli	(1644)
Rheita	(1645)
Fontana	(1646)
Cavalerius	1647
Longomontanus	1647
Durret	(1649)
Argoli	1650
Descartes	1650
Scheiner	1650
Wing	(1651)
Petavius	1652
Gassendi	1655
Licetus	1656
Morinus	1656
Tacquet	1660
Street	(1661)
Malvasia	(1662)
Levera	(1663)
Cunitia (Maria)	1664
Deusingius	1666
Lubienietsky	(1667)
Townley	(1670)
Riccioli	1671
Mutus	(1673)
Roberval	1675
De Billy	1679
Borelli	1679
Doerfel	(1680)
Lefevre	1683
Picard	1684
Hevelius	1687
Pound	(1687)
Greenwood	(1689)
Seth Ward	1689
Auzout	1693
Bouillaud	1694
Mercator, Nic.	1694
Mouton	1694
Buot	1695
Huyghens	1695
Richer	1696
Hooke	1703
Duhamel	1706
Gregory, Dav.	1708
Roemer	1710
Cassini, Dom.	1712
Cotes	1716
Leibuitz	1716
Lahire, Phil.	1718
Lahire, Gabriel P.	1719
Flamsteed	1719
Keill	1721
Wren	1723
Wurzelbaur	(1725)
Newton	1727

NATURAL HISTORY.

Mammalia. Order Carnivora.

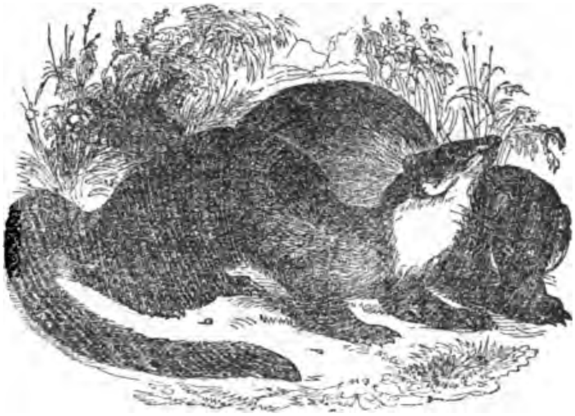


THE HARE-INDIAN DOG.

Canis Familiaris. Var. Lagopus.

The Mackenzie River, or, as Dr. Richardson has preferred naming it, the Hare-Indian Dog, is of small size and slender make. Its muzzle is narrow, elongated, and pointed; its ears broad at the base, pointed at the tip, and perfectly erect; its legs rather long and delicate; and its tail thick, bushy, and curved slightly upwards, but not by any means with the decided curl of the Esquimaux. Its body is covered with long straight hairs, the ground-colour of which is white, marked with large irregular patches of grayish black intermingled with various shades of brown. The ears are covered on the outside with short brown hair, which becomes blackish towards the margin and at the base; that of the inside is longer and white. On the muzzle the hair is white and very short, as also on the legs, but becomes thicker and somewhat longer on the feet, and is continued to the very extremities of the toes.

Dr. Richardson suspects that this variety of the Dog "was perhaps formerly generally spread over the northern parts of America; but being fitted only for the chase, it has, since the introduction of guns, gradually given way to the mongrel race sprung from the Esquimaux, Newfoundland and this very breed, with occasional intermixture of European kinds." It seems at present to be peculiar to the Hare-Indians and other tribes frequenting the banks of the Mackenzie River and Great Bear Lake, in the neighbourhood of which our enterprising countrymen, Captain Sir John Franklin and Dr. Richardson, wintered with their party, previously to setting forth on their late hazardous but eminently successful expedition to explore the northern coasts of the American continent. A pair of these graceful and elegant animals were brought away by the travellers on their return, and presented to the Zoological Society soon after their arrival in England, where the third was whelped. These, we believe, are the only individuals of the race that have ever been seen in Europe. Their air of frank and unsuspecting confidence is combined with an unusual share of gentleness and good temper. They seem perfectly at their ease, and soon become familiar even with strangers. In their native country they are never known to bark, and this peculiarity is still retained by the elder dogs; but the younger one, which was born in this country, has learned to imitate the language of its fellows. They appear to be extremely valuable to the Indians by whom they are bred, who subsist almost entirely on the produce of the chase. "The Hare-Indian Dog," says Dr. Richardson, "has neither courage nor strength to fit it for pulling down any of the larger animals; but its broad feet and light make enable it to run over the snow without sinking, if the slightest crust is formed on it, and thus easily to overtake and tease the Moose or Raindeer, and keep them at bay until the hunters come up."



THE WHITE-CHEEKED MARTEN.

Mustela Flavigula. Bodd.

Inferiour in predatory character to the Cats alone, to which they bear a close resemblance in many points of their organization, the Weasels constitute one of the most strongly marked families among the Carnivora. In slenderness of form, sleekness of fur, and agility of motion, they are excelled by none. Their long narrow cylindrical bodies are supported by short muscular legs, which are usually bent beneath them in such a manner that their bellies appear almost to glide along the ground; while the head and neck, the latter of which is unusually elongated, are of nearly equal diameter with the rest of the body. The upper and anteriour part of their heads is flattened and has a somewhat triangular form; their ears are small and rounded; their eyes of moderate size, with round or transversely elongated pupils; their nostrils seated at the extremity of a moist glandular muzzle; their tongues clothed with raised sharp horny papillæ; and their toes, of which there are five to each foot, armed with long, slender, sharp, curved, semiretractile claws. These claws, although sharp at the points, want the cutting edges possessed by the same organs in the Cats, and are besides but ill calculated by their want of strength for seizing on their prey. They are also incapacitated by the latter circumstance for burrowing in the earth, like those of the Dogs and Bears; and they seem rather to be of use in climbing trees, a feat which these animals execute with great dexterity, travelling among the branches with such rapidity as to seem rather to fly than to run. They usually remain during the greater part of the day asleep in their retreats, but towards night they begin to rouse themselves and prowl abroad in search of the living victims on which they chiefly feed. In uninhabited districts these are commonly found among the smaller animals of the Rodent Order; but a still more plentiful supply is frequently derived in cultivated countries from the farm-yard, in which the poultry forms the principal object of their nocturnal incursions. Their visits are sometimes attended with the most extensive devastation, their sanguinary dispositions impelling them to the commission of wholesale destruction for the gratification of their excessive thirst of blood.

In the more typical groups of the family, constituting the major part of the Linnæan genus Mustela, the dentition is nearly uniform, and consists most commonly of six incisors and two canines in each jaw; of two false molars, one lacerator, and one tubercular tooth in the upper jaw, and of three false molars, a lacerator, and a tubercular tooth in the lower. The group, however, for which M. Cuvier has retained the generick name of Mustela, are distinguished from the rest by being furnished with an additional rudimentary false molar in either jaw. Their muzzles are consequently somewhat more lengthened than those of the other divisions. They have also a small tubercle on the inner side of the lower lacerator; and these two characters indicate a trifling diminution in their carnivorous propensities. Their walk is digitigrade, but less completely so than in the Dogs and Cats; and their fur is, generally speaking, remarkable for its length, its fineness, and its gloss.

The fine species which forms the subject of the present article is the largest of the group. It is an animal of extreme rarity, having been well described and figured for the first time by Dr. Horsfield, in the Zoological Journal, about six years ago, under the name of Mustela Hardwickii, from a skin presented by General Hardwicke to the Museum of the East India Company. It had, however, escaped the researches of that excellent zoologist that the living animal had been seen by Pennant so long ago as the year 1774, and was described by him in the first edition of his History of Quadrupeds, published in 1781, briefly indeed, but in terms sufficiently precise not to be mistaken. From this description of Pennant, the only writer previous to Dr. Horsfield who appears to have had any personal knowledge of the animal, it was adopted into the compilations of Boddært and Shaw; the former of whom gave it the appellation of Mustela flavigula, and the latter designated it as the Viverra quadricolor. It seems to have been either passed over, or regarded as doubtful, by all the other compilers of general lists of the Mammalia. It is a native of India.

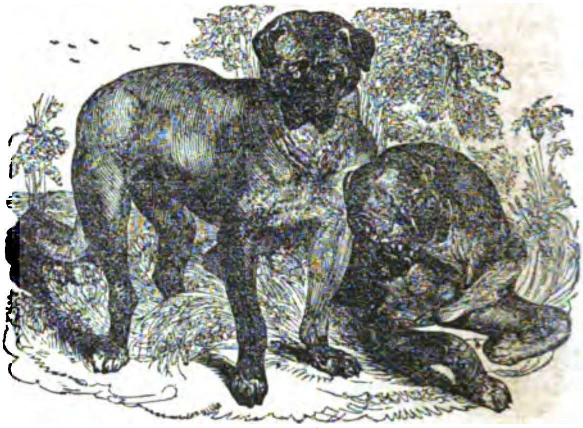
It is about two feet in length, with a tail of nearly equal dimensions. The head, nose, and upper lip, the sides of the face including the ears, the back of the neck, the tail and adjacent parts of the body, and the limbs, both within and without, are of a deep shining black. The chin and lower jaw are pure white, and the throat is of a bright yellow, blending on the sides with the brown of the back, the whole of the upper and fore parts of which, together with the belly, are uniformly of the latter colour, except on the shoulders where the hairs are tipped with yellow. The tail is perfectly cylindrical and clothed with long and somewhat rigid hairs. The pupils are round; the ears short; the whiskers moderately long; the palms of the fore feet large and of a dusky colour; and the claws of all nearly white.

THE CUBAN MASTIFF.

Canis Familiaris. Var.

This fine pair of Dogs which were presented to the London Zoological Society by Captain Marryatt, who obtained them from Cuba, partake of the characters of the Spanish Bull-dog and English Mastiff, and seem to be completely intermediate in form between the two. They are larger than our common Bull-dogs and smaller than the Mastiff, well made and rather stout in their proportions, moderately high upon their legs, muscular and powerful. Their muzzle is short, broad, and abruptly truncate at the extremity, with somewhat of an upward curve; the head broad and flat, and the lips elongated and so deeply pendulous as to overlap the margins of the lower jaw.

The ears, which are of a middling size, are also partly pendulous, but not to such an extent as to lie flat upon the sides of the head. The tail is rather short, cylindrical, and turned upwards and forwards towards the tip. Their hair is throughout short, close, and even. On the upper parts it is of a bright brown, becoming somewhat paler beneath. The muzzle, lips, ears both within and without, and a patch surrounding each of the eyes, are of a dusky black.



Notwithstanding the apparent capacity of their cranium, the dogs of this tribe are by no means remarkable for their intelligence. They are, however, eminently faithful, and as courageous as they are powerful. They are consequently chosen in preference to all others for house-guards and watch dogs, and are also in much request, wherever such sports are encouraged, for bull-fights and other similar exhibitions of brutality. For their legitimate purposes they are a most useful race.

CHYMISTRY.

ON SOLUTION.

Solution is the result of an affinity between bodies in different states with regard to cohesion. In this case liquids are called *solvents;* and they can act upon, or hold in solution, either solids or aeriform fluids. We have already alluded to instances of the solution of solids as illustrations of the general subject of affinity; and we have shown that the power of cohesion is opposed to this action. Between some liquids and solids there appears to be no attraction whatever; or, if any, it is inferiour to the attraction of cohesion by which the homogeneous particles of the solids are united; thus rosin is wholly insoluble in water, but readily unites with alcohol.

And here we may remark, that chymical attraction, in general, may be exerted in different degrees between one body and several others. There is, as we have seen, a mutual affinity between alcohol and water, whereby they are capable of mixing; there is also a mutual affinity between alcohol and rosin, whereby the former is capable of dissolving the latter; and there is no affinity between water and rosin. Now if, to a solution of rosin in alcohol, water be added, it will be found that the rosin will resume the solid form: the attraction between the particles of alcohol and those of water, is greater than between the particles of alcohol and those of rosin; the consequence is, that the alcohol quits the rosin, and combines with the water, and the attraction of cohesion being no longer opposed, resumes its ascendancy. This has been called *elective attraction*, because the alcohol may figuratively be said to exercise a choice between the substances with which it is capable of combining. This resumption of the solid form of a substance, previously dissolved in a liquid, is termed *precipitation;* although the term can only be strictly applied where the solid, set at liberty, falls to the bottom of the vessel.

Unlike the case of mixture, there is a limit to the power of solution; and liquids cannot combine with more than a certain definite quantity of any solid or aeriform body: thus water will only take up a certain known weight of alum, or alcohol of rosin. The point at which the action between the two bodies ceases, is called the point of *saturation*. Up to this point the two bodies may combine in any proportions.

Carbonick acid, or that aeriform substance, formerly known by the name of *fixed air*, which most persons are acquainted with, as given off from bottled beer or soda water, is capable of being absorbed by water; which liquid, under ordinary circumstances, will take up rather more than its own bulk of this air (or gas.) As in the case of solids, the attractive power of cohesion, at a certain point, balances the action of the solvent, so, in aeriform bodies, the repulsive power of elasticity sets similar limits to its exertion. It is only to a certain point that the solvent power of water can counteract the elasticity of the carbonick acid; and beyond this point of saturation it cannot unite with it.

The influence of heat upon the power of solution, corresponds with the difference between cohesion and elasticity. Upon solid bodies it generally *increases* the power of the solvent, by diminishing their *cohesion*. Upon aeriform bodies it *diminishes* the power, by adding to their *elasticity*. Water may be saturated with alum at the common temperature of the atmosphere, and if heat be afterwards applied, will dissolve an additional quantity; if the solution be then allowed to cool, the attraction of cohesion will resume its ascendancy, and the second portion of the alum will be deposited in solid and regular forms. If, on the contrary, a saturated solution of carbonick acid in water be heated, the gas will escape from its combination; for the heat increases the repulsive power of the particles of the gas, and the affinity of the solvent is no longer able to counteract it.

A solvent that has been saturated with one substance, is often capable of combining at the same time with others; thus water which has taken up its full proportion of salt petre, will further dissolve a considerable quantity of common salt.

The process of the solution of a solid in a liquid, is very frequently accompanied by a diminution of temperature; and great degrees of cold may be produced by dissolving certain proportions of different salts in water. A reduction of 17° is produced, by merely saturating water at common temperatures with nitre; and nitrate of ammonia will, in the same way, lower the thermometer from 50° to 4°. The solution of gases, on the contrary, is generally accompanied by the production of heat.

The properties of bodies are not changed by solution any more than by mixture; and the characters of such combinations are intermediate between those of their ingredients. The most universal solvent in nature is water; and as the characters of that liquid are very neutral, *i. e.* distinguished by no very energetick or active properties, aqueous solutions, in general, possess in an eminent degree the properties of the solids or gases with which they are combined.

Solvents may be separated from the bodies with which they are united by alterations of temperature, which change their state of cohesion. If a solution of alum be strongly heated, or boiled, the liquid will assume the state of vapour, or of an elastick fluid, and flying off, the solid will remain. If a solution of carbonick acid in water be frozen, the gas will escape, and the water remain in the solid state. The affinities, however, of some gases for water are so strong, that they rise in union with its vapour, and cannot be separated by evaporation.

CHYMICAL COMPOSITION.

Composition is the result of the highest degree of chymical attraction; which may take effect between bodies whose particles are under every modification of cohesive attraction. The attractive force, however, of cohesion, as well as the repulsive power of elasticity, are in various degrees opposed even to this power; and till reduced or modified, often prevent its action altogether. The state of liquidity is consequently most favourable to its efficiency.

The union of bodies in this intimate manner only takes place in *definite proportions*, which are invariable in the same compound, and it is commonly accompanied by a total change of their sensible properties. Great alterations of temperature almost always accompany the act of combination; and when the action is most energetick, light and heat are given off in abundance, and often with violence.

If copper filings and sulphur be mechanically mixed together, they will exhibit no tendency to unite at the common temperature of the atmosphere; but if heat be applied, as soon as the latter melts, a violent action will take place; the copper will become red hot, and a black, brittle body will be produced, with properties totally different from those of its two ingredients. This compound is often found ready formed in mineral veins; but whether the product of nature or of art, as above described, its composition is definite and invariable; and it is found to consist of sixty-four parts of copper to sixteen parts of sulphur: or 100 parts contain eighty copper and twenty sulphur. Our reason for preferring the statement of the proportion in the former numbers will hereafter appear.

It often happens, however, that a body will unite in this manner in more than one proportion with another; the composition in each case being no less definite and fixed: but the proportion of one of the ingredients of the resulting compound is always some multiple or sub-multiple of that in the first compound; that is to say, it is double or treble, or half, and so on. Thus a second combination of copper and sulphur is known, which, although it cannot be produced by the direct union of the two bodies, is of very common occurrence, and constitutes the important ore from which nearly all the copper of commerce is derived. The proportions of this compound are sixty-four copper to thirty-two sulphur; that is to say, the copper is combined with exactly double the proportion of sulphur which exists in the first combination.

The compounds which mercury or quicksilver forms with some other bodies, are well calculated to exhibit the striking difference of character which are the results, not only of chymical composition, but of composition in different proportions. If this brilliant, white, fluid metal be agitated for a long time in contact with the common air, it will unite with the oxygen of that mixture, and will be converted into a black, insipid, insoluble powder; which consists of 200 parts of mercury to eight of oxygen. If, instead of being agitated at common temperatures with the air, it be kept heated with it to nearly its boiling point, it will be converted into a red, shining mass, also a compound of the metal and oxygen; but which is endued with an acrid, metallick taste, is soluble in water, and poisonous. It consists of 200 parts of mercury, and sixteen of oxygen.

Mercury also combines with sulphur in two proportions: by long-continued trituration (or rubbing in a mortar) the two bodies unite, and form a black, tasteless compound, which contains 200 parts of mercury to sixteen of sulphur.

If mercury be poured into melted sulphur, and strongly heated, a compound will be formed, which rises in vapour, and concretes, on cooling, into a brilliant red substance, known by the name of cinnabar or vermilion. It is composed of 200 parts of mercury, and thirty-two of sulphur.

Again, the well-known medicine called *calomel*, is a compound of mercury, and an aeriform substance, which we shall hereafter describe, called chlorine. This compound is white, crystalline, very heavy, tasteless, and nearly insoluble in water. It may be taken in doses of several grains without any effect, but that of a purgative. It is composed of 200 parts of the metal, and thirty-six parts of chlorine.

Mercury is capable of combining with a further proportion of the same gaseous body; in which case it is converted into a semitransparent, white mass, of an acrid, nauseous, metallick taste, soluble in water and alcohol, and highly poisonous. It is well known by the name of *corrosive sublimate*, and is composed of 200 parts of mercury, and seventy-two parts of chlorine.

Thus substances, comparatively inert, may produce, by their union, compounds of highly active properties; and a compound of two bodies, which, in one fixed proportion will, if taken internally, have but a slight effect upon the animal frame, if united in a different proportion, will prove destructive to life.

Highly active bodies of opposite properties will also produce by their combination substances of mild character, and they are then said to neutralize each other.

Sulphurick acid, or oil of vitriol, to which we have before referred as a well-known liquid, for the purpose of illustrating the nature of chymical mixture is highly corrosive, and possesses an intensely sour taste. If brought into contact with a substance stained with the delicate colour of any blue vegetable, such as that of violets or litmus, it instantly changes its tint to bright red; a property which belongs to all acids.

There is another substance, also well known, and commonly to be met with, called *Barilla*, or carbonate of soda. It is a solid, soluble in water, of a hot, acrid, bitter tase. It changes the blue colour of vegetables to green; a property which belongs to a class of bodies denominated alkalies. Between these two bodies a strong affinity subsists. If into a solution of the latter we carefully drop a portion of the former, a brisk effervescence will ensue, and carbonick acid, or fixed air, will be given off, as from soda water. If the experiment be performed with care, and the dropping in of the acid stopped, the moment the effervescence ceases, the solution will be found to be warm, and to be possessed of properties totally different from those of the acid and the alkali from which it has been formed. It will not be sour, corrosive, acrid, nor hot. It will have no action upon blue vegetable colours, and all the active properties of the original bodies are said to be *neutralized*—they have *neutralized* one another. The product is slightly bitter, saline, and cooling. If part of the water be driven off by heat (or evaporated,) a solid will be deposited in regular forms, which was previously held in solution by the water which escapes. This substance is known by name of Glauber's salt, or sulphate of soda, and is extensively used in medicine.

That power of affinity which produces chymical composition may, as in the case of solution, exist in a body in different degrees towards other bodies; and if to a compound of two bodies a third be presented which has a stronger attraction for either of the two ingredients than they have for each other, decomposition of the original compound will take place, and a new compound will result. Barilla, or carbonate of soda, to which we have just referred, is a compound of a highly caustick, alkaline substance, called soda and carbonick acid. In the experiment above alluded to, it is decomposed; the sulphurick acid expels the carbonick acid, which escapes in effervescence, and takes its place with the soda. If a solution of this substance in water be boiled with caustick lime, the carbonate of soda will be decomposed, the carbonick acid will quit the soda and unite with the lime and carbonate of lime, or chalk, and caustick soda will be the result. This action is called, for the reason already explained, *single elective affinity*.

If two compounds be brought together in solution, it will not unfrequently happen that a process of double decomposition and composition will take place from a new adjustment of the various affinities: that is to say, the two original bodies will be decomposed, and two new compounds produced, from a mutual exchange of ingredients.

The substance known by the name of *sugar of lead*, is a compound of vinegar, or acetick acid and lead. *White vitriol* is composed of sulphurick acid and zinc. Now if, in a solution of the former substance in water, we suspend a piece of metallick zinc, we shall have an example of *single elective* affinity. The attraction of vinegar for zinc is greater than for lead; the acid will therefore abandon the lead, which will resume its metallick form, and unite with the zinc. The experiment is very beautiful as the lead is precipitated upon the zinc in an arborescent form. But if a solution of acetate of lead be mixed with a solution of sulphate of zinc, the acetick acid will, as before, abandon the lead, to unite with the zinc; but at the same moment, the sulphurick acid will attract the lead, and form with it an insoluble compound, which will be precipitated in the form of a heavy white powder. This compound action has been distinguished by the name of *double elective affinity*. Decompositions which cannot be effected by *single elective* affinity may often be produced by *double elective* affinity.

Now we may remark, that the same quantity of acetick acid which originally was combined with the lead, is exactly sufficient to enter into combination with the zinc; and also that the same quantity of sulphurick acid which entered into composition with the zinc, exactly suffices for the lead: none of the ingredients are found in excess, and the proportions of each are *equivalent* to each other in their power of combining. This observation exemplifies another fundamental law of chymical *composition*; namely, that bodies not only combine together in proportions which are fixed with regard to each other, in any given compound, but are also *definite* with regard to every other substance with which they are capable of entering into composition; so that there are certain determinate proportions of all bodies which are *equivalent* to each other in their powers of combining with all other bodies. Thus sugar of lead, or acetate of lead, is a compound of fifty parts of acetick acid and 112 parts of lead in the state (which will be hereafter explained) of an oxyde. White vitriol, or sulphate of zinc, is composed of forty parts of sulphurick acid, and forty-one parts of zinc, also in the state of oxyde. Now these proportions are all *equivalent* to one another; and if we write their numbers against the different substances as follows, we can at once perceive the proportions in which they will unite in any new combination.

Sulphurick acid - - - - -	40
Zinc (oxyde) - - - - - -	41
Acetick acid - - - - - -	50
Lead (oxyde) - - - - -	112

Thus, from such a table we may anticipate, in the double decomposition above referred to, that the white powder or new compound of sulphurick acid, and lead, precipitated, must consist of forty parts of the former and 112 of the latter; and likewise that the combination of zinc and acetick acid, left in solution, must be in the proportion of fifty parts of acid and forty-one parts of zinc: and this exactly agrees with the results of experiment. We shall hereafter find that the same equivalent numbers, or their multiples, are preserved in every possible combination with other bodies; and that similar numbers may be attached to all the known substances of the chymical catalogue. Moreover, when any body is compounded of two simple substances and enters into combination with another body, the sum of the equivalents of the two elements will give the number, denoting the proportion in which it will so combine. Having endeavoured to convey a general idea of this universal law of chymical composition, it does not enter into our plan to pursue the subject further in this place: its full developement will only be found in the complete body of chymical facts.

The attraction of cohesion is opposed to the highest degree of chymical attraction in the same way as to the inferiour degrees. Barilla or carbonate of soda is capable of acting strongly upon pounded flint, and produces, by its combination with it, the well-known substance, crown-glass: but before the attraction of cohesion in the flint is diminished by pounding, the chymical affinity between them is not efficient.

The minor degree of affinity by which solution is effected has also a strong influence over the power of composition. It acts chiefly by counteracting cohesion and repulsion, and thus bringing the particles of solids and aeriform fluids within the sphere of mutual action.

Sugar of lead and white vitriol, in their solid forms, have no action upon each other; but balance their powers of cohesion by dissolving them in water, and the double elective affinity is immediately at liberty to act in the way which we have pointed out.

There is another circumstance, mechanical in its nature, and the influence of which is somewhat obscure, which sometimes interferes with *chymical composition;* that is, *quantity:* for, in comparing the attraction of two bodies for a third, a weaker affinity in one of the two is found to be compensated by increasing its quantity. If one part of common salt (which may be considered as composed of muriatick acid and soda) be mechanically mixed with half its weight of red lead (oxyde of lead) and water, to the consistency of a thin paste, no decomposition of the salt will ensue: the soda has a stronger attraction for the acid than the oxyde of lead. If, however, the weight of the red lead be increased to three or four times that of the salt, after standing some time, the strong taste of the soda will be perceptible; proving that the larger quantity of the oxyde has the power of detaching a considerable portion of muriatick acid from the soda, notwithstanding the stronger affinity.

The influence of temperature upon the highest degree of chymical attraction, is various: sometimes it favours its operation by counteracting the cohesion of solids; sometimes it opposes it by increasing the repulsion of aeriform fluids. An increase of heat frequently increases directly the energy of affinity, and determines combinations which would not otherwise take effect; and different degrees of temperature often produce opposite effects.

We have shown that, by raising the temperature of quicksilver or mercury to nearly its boiling point, a combination is determined between it and oxygen, one of the mixed gases of the atmosphere: if this compound be more strongly heated still, it will be decomposed, and oxygen and the metal will be reproduced.

If a spirit lamp be supplied with ether instead of alcohol, it will inflame upon approaching to it a body in a state of inflammation; but if instead of a body of so high a degree of heat, a coil of platina wire, heated to redness, be laid upon the wick, the ether will still be consumed, and the wire will continue to glow, but no flame will be produced. The products of these two species of combustion will be totally different, and each is determined by the degree of temperature at first communicated, and which is maintained without variation, by the heat evolved in each process.

Chymistry will be continued in the third volume, commencing with Chymical Decomposition.

MATHEMATICAL GEOGRAPHY.

GEOGRAPHICAL MAPS.

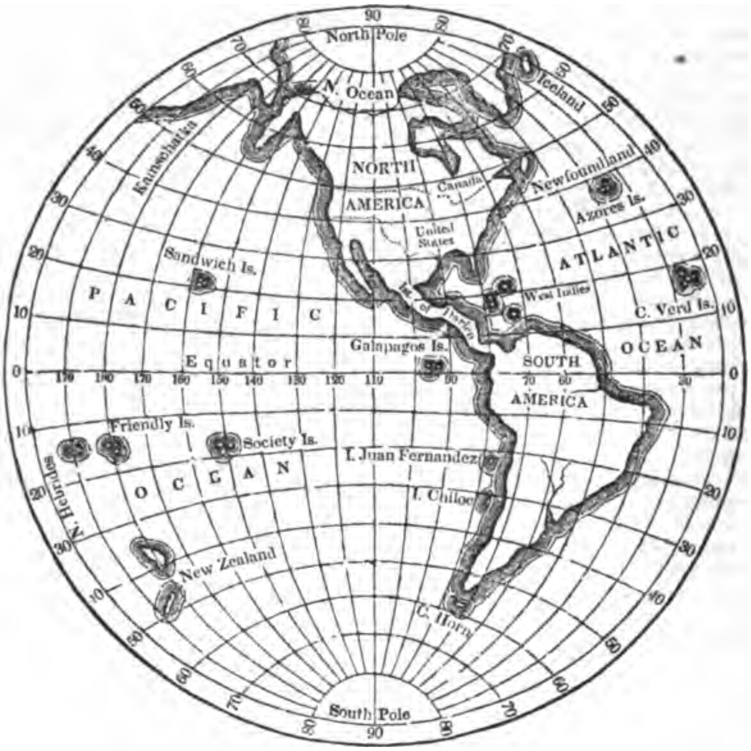
Large globes are costly and inconvenient instruments; small ones do not exhibit sufficient details. It became necessary, therefore, to have recourse to pictures, which, on a plain surface, might give a representation of the globe and its parts. These representations embrace either the whole earth, or a part of the world, or a single country. In the first case they are called *maps of the world,* and when they have a circular form, *hemispheres;* those of the second class are called *general maps;* the others are *special maps.* Among the special maps, some represent a province on a large scale, with all its remarkable places; these are *chorographick maps.* If the designer has entered into all the details of the nature of the ground, or has even traced out insulated habitations, and the direction of roads and rivers, they are *topographical maps.* Geographical maps, properly so called, are also distinguished from those that are appropriated to a particular use; such are *hydrographick charts,* destined for mariners, *mineralogical maps,* and others.

The figure of the earth, prevents the possibility of giving a general picture in which the distances of places, and the relative extent of regions, might be preserved in their mutual relations. There are curved surfaces, which can be extended on a plane without rent or duplication, and which for this reason are called *developable surfaces;* such are those of cones and cylinders: but others like those of the sphere and spheroids, cannot be so extended. The earth being a spheroid, its surface cannot coincide rigorously with a plane; and thence results the impossibility of making on a map at the same time, and in their natural relations, the extent of countries, the distances of places and the similitude of configurations. Geographers are obliged to have recourse to various constructions, to represent at least in an approximate manner, each of these relations in particular.

These constructions have received the name of *projections;* a name applied in general to designs, the object of which is to indicate on a plane the dimensions of space, and of the bodies it contains. They are of two kinds: some are real *perspectives* of the globe, or of parts of its surface, taken from *different points of view,* and on different planes; the others are only a kind of developements, subject to approximating laws, and appropriated to the relations which it is wished to preserve in preference. Projection, signifies the representation of an object on the perspective plane, or, it is the pictorial delineation of an object on a plain or flat surface.

Orthographick projection is that where the surface of the sphere is represented by a plane which cuts it through the middle, the eye being placed vertically at an infinite distance from the two hemispheres. It will be observed, that the rays by which the eye sees at an infinite distance are parallel. Stereographick projection is that where the surface of the sphere is represented on the plane of one of its great circles, the eye being supposed at the pole of that circle. In the stereographick projection the globe is considered as a transparent solid. The hemisphere represented is that which is opposed to the hemisphere in which the eye is supposed to be. Besides the orthographick and stereographick projection, there is a third projection in perspective called *central.* It is obtained by placing the point of view at the centre of the sphere, and taking for the picture a plane tangent to its surface.

W. HEMISPHERE.



MAP OF THE

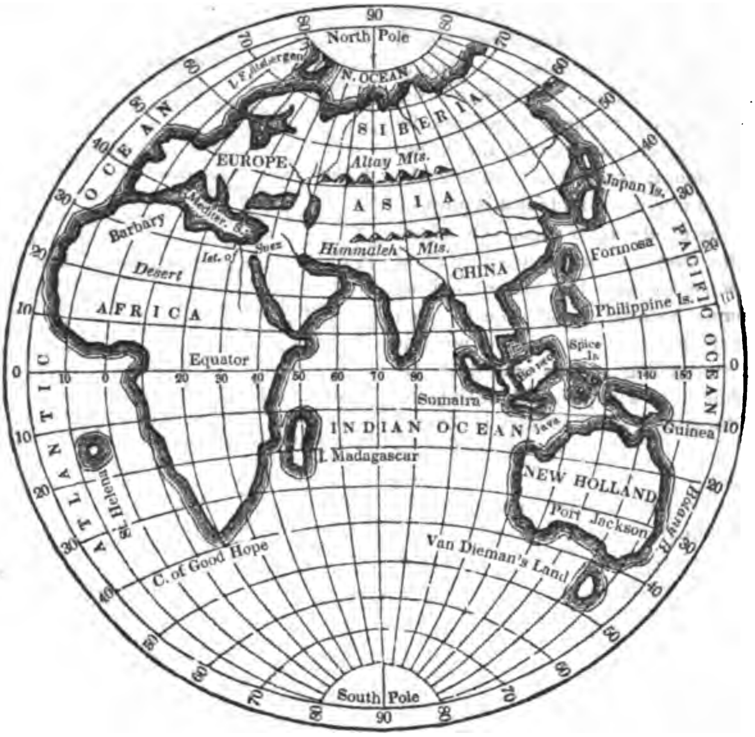
To these maps thus obtained may be added, Geographick and Hydrographick maps by conick and cylindrick developement. Among all bodies which can be exactly retraced on a plane, the cone and cylinder have the most affinity with the sphere; the cone especially offers the advantage, that a small conick zone hardly differs at all from a spherick zone. Hence it is conick developments that afford the best projections of special geographical maps, and even, by the help of some modifications, for considerable parts of the globe. The cylindrick maps can only serve for small parts of the globe. As they are projected, the meridians all tend to one point, which is the pole, and the parallels of latitude are concentrick circles of which the pole is the centre.

But in vain would geometry have taught us so many and such ingenious methods of tracing maps in a manner conformable to the wants of geography, if we could only insert in these pictures of the globe incomplete images of the different countries. It is the novelty, the exactness, and richness of details, which distinguish a learned map from those unformed sketches, the contrivance of which is confided to ignorance. To compose a good map, we must know how to choose and to assemble the details which will form its merit.

If the map is general, a projection such as the different modified conical projections, is employed. If it is desired to construct a map of the world, destined for the studies of astronomical geography, the horizontal stereographick projection is used. If it is to be applied to physical geography, the developement of a single meridian is preferred. The *special* maps—where an empire or province is traced, the choice of the projection seems more indifferent, because the defects of all the methods diminish when the map embraces only a small portion of the surface of the globe.

The impossibility of admitting into a map, even of very great dimensions, all the details relative to topography, necessitates a choice among those details, which, however, it is impossible to subject to general rules. One map is destined to show the political limits of states, and the boundaries of provinces, with their chief towns; another is designed to show the chains of mountains and the branches of rivers; and these two classes still admit of subdivisions. A *military* map is in reality, only a perfect and detailed topography; the warrior should find it in every road in which he can advance, either with artillery, or only with his musket; every ford in a river, every defile by which he can turn the position of an enemy; in a word, these maps should exhibit all the localities which can influence his operations; the number of good military maps is therefore very limited. It is in great part to the excellence of those supplied by the *Depot de la Guerre*, that the French armies owe their successes. A learned geometer, deeply skilled in the art of war, had made a list of the French generals, in which he estimated their talents; opposite an illustrious name was often this note, *He is well acquainted with the map.* The importance of geographical studies for the leaders of

E. HEMISPHERE.



WORLD.

armies was felt by the ancients, and the Romans knew well, "that localities frequently influence victory more than courage and numbers."

Other branches of government equally require maps especially consecrated to a particular object. Those of the waters and forests, for example, should always be consulted as a beacon in cultivation; and in this respect the states of Germany have hitherto had advantages over France. What a military is for the ground, *nautical* maps are for the seas; they even interest the physical geographer, as they represent, though very imperfectly, the irregularities of the bottom of those basins covered with water, which occupy so vast a portion of the globe. The rocks, reefs, and sand-banks, scattered through the seas, are sub-marine mountains and hills; and a complete knowledge of them would throw great light on the geography of the terrestrial mountains. Unfortunately nature seems to forbid the hope of our ever completing that part of geography. "Navigators," says a celebrated mariner, "can only answer for the routes they have made, or the soundings they have taken; and it is possible, that, on the finest seas they may have passed *close beside* banks or shoals where there were no breakers, (that is to say,) whose existence was not betrayed by the foam of broken waves." The maps of rivers present in detail all the branches of a stream, and all the circumstances of its course. They are comprised with nautical maps, under the general appellation of *hydrographick*.

There are also maps of botany, mineralogy, geology, and even of zoology, the object of which is to show the geographical distribution of the productions of nature; there are some which their authors decorate with the name of *historical*, and which are intended to show the migrations of nations, and the changes of sovereignty; finally, there are few objects, the reduction of whose relations of locality has not been attempted in the form of maps. But the composition of these sorts of tables is subject to rules derived from sciences foreign to geography.

Publick instruction requires *elementary maps*, the merit of which consists in rendering, in a faithful and complete manner, truths already known. The essential point in an *elementary atlas*, is not to display on a great scale maps full of details, and of minute exactness, but rather to exhibit, in a series of small but numerous maps, the complete assemblage of the principles of the science.

In the mathematical elements of a map, accurate astronomical observations, and nice trigonometrical surveys are indispensable to give them value. When these are determined, the historical, political, and physical details are introduced, according to the extent and object of the map.

The positions of places are indicated by signs, which are modified according to the importance of those places and the rank they occupy. A simple line shows the course of small streams. The sea-shores are indicated by a very clean line, bordered with hatchings. In geographical maps, these hatchings, exteriour with respect to the land, may be conceived to represent the undulations of the sea on the coasts; while, in marine maps, the hatchings done on the land, paint to the eye the acclivity of the coast. Navigable canals are represented by straight lines joined angularly, which distinguishes them sufficiently from natural streams of water, indicated by undulating lines. Roads are often marked by two fine parallel strokes, sometimes by simple lines, continuous, or punctuated; the latter, however, are most commonly reserved for marking the limits of states and their provinces, and for this purpose the size and form of the points are varied. Orthographical exactness of the names in maps, it is important to preserve. Good sense dictates the rule of writing each geographical name, as near as possible to what is used in the country it belongs to, and to what is pointed out by sound etymology. It is also desirable that the physical elements of a map should indicate the different features of the globe. If a country is covered with plains, or is rough with mountains, naked or wooded, dry or marshy. These are pointed out either by conventional signs, or pictured representations. The expression of these different circumstances, joined with the climate and the laws of meteorological phenomena, determine the *physical geography* of each country.

Here we close the subject of Mathematical Geography, which, as the basis of the whole science, we have endeavoured to make our readers thoroughly understand. With the commencement of our next volume, we shall take up the more interesting branch of the science; viz. PHYSICAL GEOGRAPHY.

BIOGRAPHY.

HENRY KNOX, MAJOR GENERAL U. S. A.

Gen. Knox was born in Boston, July 25, 1750. He received a common school education in his native place. Early in life, he began business as a bookseller which however he relinquished for the purpose of devoting himself to the cause of the Revolution. Before hostilities between this country and Great Britain in the revolutionary war commenced, he discovered an uncommon zeal in the cause of liberty. Being placed at the head of an independent company in Boston he exhibited in this station a skill in discipline which presaged his future eminence. It was at the unanimous request of all the officers of artillery, that he was intrusted with the command in that department. When the corps of artillery in 1776 was increased to three regiments, the command was given to Knox, who was promoted to the rank of a brigadier general. He was actively engaged during the whole contest. After the capture of Cornwallis in 1781, he received the commission of major general, having distinguished himself in the siege at the head of the artillery. Previously to the adoption of the present constitution he succeeded General Lincoln as secretary at war in March 1785; and after our present government was organized in 1789, Washington nominated him for the same office. He continued to fill this department till the close of the year 1794, when he resigned it. In his letter to the President he says, "After having served my country nearly twenty years, the greater portion of the time under your immediate auspices, it is with extreme reluctance I find myself constrained to withdraw from so honourable a situation. But the natural and powerful claims of a numerous family will no longer permit me to neglect their essential interests. In whatever situation I shall be, I shall recollect your confidence and kindness with all the fervour and purity of affection, of which a grateful heart is susceptible." Washington in reply assured him of his sincerest friendship, and declared him to have "deserved well of his country." During the last years of his life, General Knox lived at Thomaston, Maine, where he died, Oct. 25, 1806, aged 56 years. His death was occasioned by his swallowing the bone of a chicken. His wife, the daughter of I. Flucker, secretary of Mass., died June 20, 1824. In April 1796 he lost two children by death in one week; and in a manner almost as sudden he had previously lost five children.

He was distinguished for his military talents, and possessed in an uncommon degree the esteem and confidence of Washington. Though a soldier and a statesman, he did not dismiss the amiable virtues of the man. There was a frankness in his manners which was pleasing, and his heart was susceptible of the kindly affections.

LOUIS PHILIP, KING OF THE FRENCH.

Seldom indeed has fortune exercised her dispensations more copiously than in directing the existence of Louis Philip, the present King of the French, through its various phases. A prince, a conqueror, a refugee, a martyr, an exile:—a lieutenant general to-day, a king to-morrow! His triumph, now a trophy to the country—and now, his exile an exultation: his name, now an abomination; and now, his assumption of royalty the very safety of "*le grand nation*."—Once the most remote aspirant to the throne of his ancestors; now, enjoying what was sacrificed by the imbecility of Capet, and the ambition of Napoleon; now content with the simple security of a republican asylum, and now dispensing the fortunes of a monarchy.

Louis Philip, the eldest son of the unfortunate Egalite, by Marie Adelaide de Bourbon Panthievre, was born in Paris on the 6th of October, 1773; so that he is now in the sixty-second year of his age. Louis Philip first bore the title of Duke of Valois, but on his father's accession to the title of Duke of Orleans, he became the Duke of Chartres; and in the enjoyment of this title all his subsequent sufferings commenced and progressed. In the year 1778, he was placed under the tutorship of De Bonnard, where he remained until the year 1782, when his tuition was confined to the *surveillance* of the celebrated Madame de Genlis; under whom he obtained no inconsiderable portion of that philosophy which distinguished his subsequent career. When he had attained his eighteenth year, a decree was issued by the constituent assembly, requiring all proprietary officers to surrender their military profession, or immediately and effectively to join their respective regiments. He, true to the glory of his country, and possessing the abstract ambition to serve her reputation and her interests, placed himself at the head of the 14th regiment of dragoons, which he joined at Vendome, where it was stationed. Here his humanity and courage in saving a nonjuring clergyman from the violence of the populace, and an engineer from drowning, obtained for him from the city the offer of a civick crown, and the entire respect of the inhabitants. In the month of August, 1791, he went with his regiment into Valenciennes, where he wintered and performed the duties of the oldest colonel of the garrison. In the year 1792, when he had attained only his nineteenth year, he received from the celebrated Kellerman, who had been just reinforced from the army of the Rhine, the honour of the command of twelve battalions of infantry, and six squadrons of cavalry, at whose head he fought in the battle of Valmy, plucking laurels from the brows of veterans, and astonishing the experience of age with the daring chivalry of youth; and rendering his bravery not more remarkable for the perseverance with which it was exercised, than the judgment with which it was directed. He shortly after accepted the offer of a command in the army of Dumourier, who was about to proceed to Flanders to undertake the invasion of Belgium: little, at that time, was his present connexion with that nation anticipated; a connexion which, notwithstanding the amicable relation of other interests, is pregnant with most important consequences. On the 6th of November, he distinguished himself at the battle of Jemappes, and contributed to the triumph of the French that day, under Dumourier. When the decree of banishment was passed by the Convention against the members of the Bourbon family, Louis Philip was at Tournay; and became desirous that his father and family should emigrate with him to the United States; but before he could complete the necessary preparatory arrangements the decree was revoked. In February, 1793, he was recalled to the army, and served at the siege of Maestrich under Miranda; when too openly manifesting his hostility to the revolutionary excesses in France, he soon saw that a decree had been hurled against himself, and immediately resolved on quitting both the army and the country. He according went to Mons, where he obtained passports for Switzerland, whither he went in the year 1793; and there, passed as a fugitive, through the countries, which, a short time since, he passed over as a conqueror; and here he first became acquainted with his family's arrest. In September he arrived at Basle, and finding no place safe for him, he was advised, by the refugee, General Montesquin, who lived in Switzerland, under the name of Chevalier Rionel, to wander in the mountains, but not to tarry for any considerable time in one place; until the progress of time would tame the aspect of political severity. This advice he adopted, and travelled into the interiour of Switzerland and the Alps; and under those circumstances exhibited a philosophick courage in contending against misfortune and poverty, which would have been worthy of the most stern of the stoicks. In a short time he was recalled to Brengarten by Montesquin, who provided him with a professorship in the college of Richenan, for which he was examined and appointed under a fictitious name. In this college Louis Philip, the King of the French, taught for eight months, his name and rank equally unknown; and here he first became acquainted with the fate of his unfortunate father. Some political changes having taken place in the Grisons, Montesquin deemed it no longer hazardous to give the ducal pedagogue an asylum; and consequently invited the Duke to his dwelling, who left the college with the regret of the professors and pupils, and repaired to Bremgarten, where, under the name of Corby, he remained, until the decline of 1794, when his retreat being no longer a secret, he again resolved on quitting Europe for America, and went to Hamburg, as the most convenient place for embarcation; but not having sufficient means to sustain his intentions, he procured a small letter of credit on a banker at Copenhagen, with the intention of visiting the north of Europe. This banker succeeded in getting him passports from the King of Denmark, as a Swiss traveller; and Louis Philip forthwith travelled through Norway and Sweden; journeyed on foot with the Laplanders, passed along the mountains to the gulf of Tys, and reached the north cape on the 24th of August 1795, where he remained for a few days situated at 18 degrees from the Pole: he then repassed through Finland to Torneo, and thence to Abo and Stockholm. In the month of August 1796, he received a most admonitory letter from his mother, the Duchess of Orleans, requesting him to leave Europe and take up his residence in America: he accordingly sailed from the Elbe in September, 1796, and arrived in Philadelphia in the October following.

In the course of the year 1797, he was joined by his brothers, the Duke of Montpensier and the Count de Beaujolais, and, accompanied by them, set out for Baltimore; he passed from thence into Virginia, where according to an invitation given before the expiration of his presidency, they had the honour of meeting General Washington at his Mount Vernon residence. —Here the Father of his country and his amiable consort treated the princely wanderers with their characteristick kindness and hospitality; and they, after a short stay, proceeded southward; they thence returned northward, and visited the Falls of Niagara, and in July, 1797, returned to Philadelphia, during a fearful prevalence of the yellow fever. It was their desire, but not their ability, to leave this city. They, who had been born princes and educated to their birth, had not the trifling means of removing from their pestilential residence, and they must have severely felt the mutability of fortune's favours.—In the following month they received from their mother a remittance which enabled them to proceed to New-York, from which place they went to Rhode Island, Massachusetts, New Hampshire, and Maine. On their return to Boston, they received the mortifying intelligence of their mother's banishment, and immediately returned to Philadelphia, with the intention of joining her in Spain, the place of her exile. In the month of December, 1797, they left Philadelphia; and, travelling down the Ohio and Mississippi, reached New Orleans, where they sojourned for five months, at which time, tired of the expectation of a Spanish ship, they went on board of an American one, which was captured by an English frigate. The duke now discovered himself to the captain, and he and his brothers were landed at Havana on the eleventh day of March, 1798. Here they in vain attempted to procure a passage to Europe, and, though regretting their exile, were at last contented in obscurity, if they could obtain an honourable livelihood.

The hopes which their reception at Havana inspired, were disappointed by the Court of Madrid, by which they were forced to leave Cuba; and an order was received by the Captain General of Havana to send the three brothers to New Orleans, without providing them with any means of support. They, however, refused to go, but went to the English Bahamas, where they were received by the Duke of Kent in the kindest manner. They sailed thence for New York, whence they sailed for Falmouth, and arrived in London in February, 1800. He took up his residence at Frickenham, and visited every thing curious in Great Britain, and attentively studied the political economy, and laws and manners of the country. In the month of November, 1809, he was married at Palermo to the Princess Amelia, daughter of the King of Sicily. On the fall of Napoleon, he repaired to Paris, where he remained until the return of Napoleon from Elba, when he sent his family to England, and joined them there in March, 1815. After the final overthrow of the Emperour, and the restoration of Louis XVIII., the Duke returned to France, and took his seat in the Chamber of Peers, where he distinguished himself by the liberality of his sentiments, and the purity of his principles. In the year 1824 he received the title of *Royal Highness*, and in 1830, after the events of the revolutionizing *trois jours*, he was invited to assume the executive power, under the title of Lieutenant General of the kingdom; this invitation he accepted, and immediately issued a proclamation in that capacity.

On the 3d of August he opened the Chambers, and announced the abdication of the throne by Charles X. and his son. On the 6th and 7th of that month he was invited by the Chamber of Deputies to fill the throne which they had just declared vacant, and under certain conditions, which he accepted, he assumed the title of King of the French. On the 9th he took the oath to the new charter as Louis Philip I., and in a short time the new dynasty received the acknowledgment of all the foreign powers. Whether the French nation gained by the accession of this new dynasty, comes not within the proposed limits of this article; but the affirmative is very generally questioned. The object of this memoir was to exhibit the mutability of fortune, to which all hold an equal inheritance; and with a perfect confidence in the truth of the introductory sentence, we in conclusion repeat that "seldom, indeed, has fortune exercised her dispensations more capriciously than in directing the existence of Louis Philip, the present king of the French, through its various phases;" to-day the protege of an individual, and to-morrow the crowned choice of a nation.

NAVAL.

AMERICAN NAVY PAY.

The new Naval Bill, increasing the pay of officers in the U. S. Naval service, was passed March 2, 1835. As an interesting matter of record, we give below the leading provisions of the Bill relating to officers, in a convenient form for reference. The pay mentioned, is such as is received when in actual service. The pay of officers, not on duty at sea, or off duty, or waiting orders, is considerably less.

The Senior Captain, receives per annum	$4,500
All other Captains, when in command of squadrons, on foreign stations - -	4,000
On other duty - - - - - -	3,500
Commanders or Masters Commandant -	2,500
When attached to Navy Yards - -	2,100
Lieutenants, commanding - - -	1,800
On other duty - - - - - -	1,500
Surgeons, for the first five years after date of his commission per year - - -	1,000
For the second five years - - -	1,200
" " third - - - - - -	1,400
" " fourth - - - - - -	1,600
After he shall have been commissioned as a surgeon twenty years and upwards -	1,800
Assistant Surgeons, at sea - - -	950
Waiting orders - - - - -	650
Chaplains - - - - - - -	1,200
Professor of Mathematicks - - -	1,200
Secretaries, to commanders of squadrons -	1,000
Sailing Masters, - - - - - -	1,100
Second Masters, - - - - - -	750
Passed Midshipmen - - - - -	750
Warranted Masters' Mates, - - -	450
Midshipmen - - - - - - -	400
Clerks of a yard - - - - - -	900
First Clerk to a commandant of a navy yard	900
Second Clerk, - - - - - - -	750
Clerk, to commanders of squadrons, captains of fleets and commanders of vessels -	500
Boatswains, *Gunners*, *Sailmakers*, *Carpenters* of a ship of the line, for sea service	750
Of a frigate, for sea service - - -	600

COMPARISON BETWEEN THE NAVY OF FRANCE AND ENGLAND.

According to the official documents, the officers of the *English Navy* are, 44 admirals, 62 vice admirals, 64 rear admirals, 43 rear admirals on half pay, 786 captains, 877 commanders, 279 lieutenant commanders, 3,172 lieutenants, 487 masters, 625 quarter-masters, 1,088 medical officers, 63 chaplains.

There are 22 ships of 100 guns and over, 99 seventy-four gun ships and over, 104 frigates of and above 42 guns, 22 steam vessels, and 310 ships ranging from 40 to 36 guns. In all 557 vessels above fifth rate. The vessels of the sixth and seventh rate are not enumerated.

The officers of the *French Navy* are 3 admirals, 12 vice admirals, 22 rear admirals, 70 captains of line-of-battle ships, 70 captains of frigates, 90 captains of corvettes, 450 lieutenants of line-of-battle ships, 550 do. of frigates, 315 medical officers, 12,500 masters, seamen, and boys.

There are 40 line-of-battle ships of 74 to 80 guns, 52 frigates 1st, 2d, and 3d rate, 25 corvettes, 17 steam ships, 300 brigs, schooners, &c. &c. In all about 434 vessels.

England expends on its navy twenty-five millions of dollars annually. France fourteen millions.

MODE OF RATING SHIPS IN THE BRITISH NAVY.

First rate.	All ships with three decks.
Second rate.	Two deckers of 80 guns and upwards.
Third rate.	Ships of 70, and less than 80 guns.
Fourth rate.	Ships of 50, and less than 70 guns.
Fifth rate.	Ships of 36, and less than 50 guns.
Sixth rate.	Ships of 24, and less than 36 guns.
Seventh rate.	Sloops and all other vessels.

ILLINOIS.

"A Gazetteer of Illinois," recently published in that State, gives the following Table to show the forwardness of the season in that region

April 1. Peach trees in bloom.
2. Asparagus fit for the table.
3. Peas, beans, and onions planted.
6. Heart's ease and violets in bloom.
7. Beets, carrots, &c. planted.
10. Spring completely opened; and the prairies were green. Currant and gooseberry bushes in bloom.
13. Lilack and strawberries in bloom.
19. A great variety of wild flowers in bloom.
20. Nearly all garden seeds planted.
25. Raspberries in bloom.

27. Lettuce, radishes and pepper-grass fit for use.
30. Roses and honey-suckles in bloom.

None of these, it is said, were injured by frost.

The author estimates the funds and claims of Illinois for education at not less than two millions of dollars.

We add a short extract from the work:—

"In no part of the United States can uncultivated land be made into farms with less labour than Illinois. An emigrant may purchase a quarter section for $200, a proportionate supply of timbered and prairie land, and have a large farm under cultivation in a short time. His cattle, horses, and hogs will run upon the range around him, and find feed nine months in the year, and a small amount of labour will furnish a supply of winter food. Hundreds of families, who have not the means to purchase, settle on the publick lands, make their farms, and live unmolested. Any labouring man, with reasonable industry and economy, with a family, may arrive here without any capital, and in half a dozen years, be the owner of a good farm and stock in abundance. The prairies and woodland would furnish range until his farm was made. Those who have one or two thousand dollars to commence with have peculiar advantages.

The following is probably a true account of the first appearance of a white man, among the Canadian Indians, and his reception and treatment. It is from "Hawkins' New Picture of Quebec." Giovanni Verazzano, a Florentine navigator, on a voyage of discovery in 1525, had arrived off some portion of the northern coast and cast anchor. "At the desire of Verazzano, a young sailor had undertaken to swim to land and accost the natives; but when he saw the crowds which thronged the beach, he repented of his purpose, and although within a few yards of the landing place, his courage failed, and he attempted to turn back. At this moment the water only reached his waist; but overcome with terrour and exhaustion, he had scarcely strength to cast his presents and trinkets upon the beach, when a high wave threw him senseless on the shore. The savages ran immediately to him a short distance from the sea. Great was his terrour, when upon recovering his recollection, he found himself entirely in their power. Stretching his hands towards the ship, he uttered piercing cries, to which the natives replied by loud yells, intended, as he afterwards found, to reassure him. They then carried him to the foot of a hill, stripped him naked, turned his face to the sun, and kindled a large fire near him. He was fully impressed with the horrible idea that they were about to sacrifice him to the sun: his companions on board, unable to render him any assistance, were of the same opinion. They thought, "that the natives were going to roast and eat him." Their fears, however, were soon turned to gratitude and astonishment: the savages dried his clothes, warmed him, and showed him every mark of kindness, caressing and patting his white skin with apparent surprise. They then dressed him, conducted him to the beach, tenderly embraced him, and pointing to the vessel, removed to a little distance, to show that he was at liberty to return to his friends. Who first offers violence and indignity the untutored Indian, or the boasting dispensers of civilization?

EARTHQUAKE IN CALABRIA.

The effects of the great earthquake of 1783 in Calabria, upon the nerves of many individuals, were remarkable. Some remained for a long period in a state of helpless debility, and trembled at every trifling occurrence. Others appeared as if paralyzed for a considerable time; while some declined rapidly in health and strength, from inability to digest their food; and others lost all powers of recollection for a considerable period. Some remarkable and well-attested instances of the long endurance of brute and human life without sustenance, are deserving of record. Two pigs which had been buried thirty-two days under the ruins, were heard to grunt by the labourers removing the rubbish. They were extricated in feeble and emaciated condition, and for some time refused the food offered them, but drank water with insatiable eagerness, and rapidly recovered. At Polisthena, a cat was buried forty days under the rubbish, and taken out in a wretched condition. She exhibited insatiable thirst, but soon recovered. In the same place an aged woman was found under the ruins of her dwelling seven days after the earthquake. When discovered she was insensible and apparently dead, but she gradually revived, and complained of no evil but thirst. She continued long in a state of weakness and stupor, and was unable to take more than very small portions of food, but eventually regained her wonted health and spirits. She stated, that very soon after the house fell, she experienced a torturing thirst, but that she soon lost all consciousness, and remained insensible until her release. In Oppido, a girl of fifteen, named Aloisa Basili, remained eleven days under the ruins without nourishment, and for the last six days in close contact with a dead body. She had the charge of an infant boy, and, when the house was falling, caught the child in her arms. He suffered greatly from incessant thirst, and expired on the fifth day. Until this period the senses of the poor girl had not failed her, but now she sunk under the combined tortures of hunger and thirst. When restored to animation, she complained of no suffering but thirst. The most remarkable instance of self-possession occurred near Oppido. The prince, together with his family and many guests, were seated at table; when the heaving earth began to rock the house, one of the company started from his chair, and perceiving an aperture in the wall, sprang through it and escaped, with only the loss of a shoe. All the others perished.

THE WALL OF ANTONINUS.

This was an entrenchment raised by the Romans across the north of Britain under the direction of Lollius Urbicus, legate of Antoninus Pius, about the year A. D. 140, and is supposed to have connected a line of forts erected by Agricola, A.D. 80. Of ancient writers, it is noticed by Julius Capitolinus only, and by him is termed a turf wall (*murus cespititius.*) The work was composed of a ditch, a rampart with its parapet, made of materials promiscuously taken from the ditch, and a military way formed with much skill, running along the whole line of the entrenchment at the distance of a few yards on the south side. It extended from Dunglass Castle on the Clyde to the heights above Caer Ridden Kirk, a little beyond the river Avon on the Frith of Forth, or probably to Blackness Castle, two miles further on, though it cannot now be traced so far. In its course are nineteen forts, the eighteen distances between which amount to 63,980 yards, or thirty-six English miles, and the mean distance from station to station is 3554 yards, or rather more than two English miles. In the position of the forts, the Romans chose a high and commanding situation from whence the country could be discovered to a considerable distance, contriving, as far as circumstances would permit, that a river, morass, or some difficult ground should form an obstruction to any approach from the front. Forts were also placed upon the passages of those rivers which crossed the general chain of communication.

From inscriptions discovered in Scotland, it appears that the entrenchment was made by the second legion, by vexillations of the sixth and the twentieth legion, and the first cohort of the Tungri. A very considerable portion of the entrenchment may still be traced. The modern name is Grimes Dyke; Grime, in the Celtick language, signifies great or powerful.

TO ITALY.

"Two or three columns, and many a stone!
Marble and granite with grass o'er it grown!
Out upon time! it will leave no more
Of the things to come, than the things before!
Out upon Time! who for ever will leave
But enough of the past for the future to grieve."

Clime of the Cesars, though thy glory's dead!
Though all thou hadst of beautiful and brave
Sleep in the tomb or moulder in the wave—
Tho' the green wreath has left thy laurelled head!
Tho' tyrants trample thee—tho' all forget—
Shrine of the unforgotten! thou art lovely yet.

In every hallowed wood—in every vale—
By the deep magick of the moonlight hour,
Pours her soft notes o'er bowery banks and flower
Her reed-rich song—the lovely nightingale!
There the green olive loves its parent earth
As when Tritoni smiled upon its golden birth.

Long centuries of dead empire—fire and flood,
The Goth—the Vandal—Tyranny and Time,
Resolved to dust thy monuments sublime—
Where the proud Capitol in grandeur stood—
Where soared thy victor eagles—flashed thy spears,
Now memory blends her tale with chains and sighs and tears.

Where is that pyramid of empires?—where
The brightest name the page of glory fills—
Colossal Rome with her eternal hills?
GONE—levelled in the dust of 'things that were,'
Where are her myriad triumphs—where her deeds?
ALL MELTED in the mass of Apostolick beads.

Wan skeleton of empires!—there she stands,
A crosier for her sceptre—on a throne
Of temples—statues—monuments o'erthrown—
Her sons are slaves and tyrants—and the hands
That should have righted her with their best veins,
But bless the brute-like lord that rivets close their chains.

Oh, for the lava-tongue of Cicero!
To pour into their blood a burning stream
Of fiery eloquence—to light a flame
And rouse within their breasts that maddening glow,
That RIOTS in the veins of men who've thrown
Life, hope, HOME, freedom, all, on their own strength, alone.

"Mother of arts and arms."—Oh Italy!
Where blast and breeze to slumbering fancy brings
The rushing of a mighty spirit's wings—
Art THOU unfit to class among the free?
Has tyrant-crouching man no tears to flow
For thee and for thy fall—and vengeance for the FOE.

HORRIBLE MODE OF TORTURE AND EXECUTION AT MONTE VIDEO.

In the various uses to which they apply the hides of bullocks, that of punishment is not left out. It is related of them that they sew up their prisoners in a wet hide, leaving out the head and neck only, and in this condition lay them on the ground in the sun to dry. In the process of drying, which the hide soon does in the powerful effects of the sun, it becomes contracted and produces the most excruciating torture on the unfortunate prisoner by the increase of pressure; but if night arrives before he dies from its effects, the hide relaxes again with the moisture from the air, only to prolong his sufferings on the next day, which generally is the last. So cruel a death is even worse than that which the boa constrictor can inflict, and the invention of it is said to belong to a barbarian named Ramiriz.

Physick for the most part, is nothing else but the substitute for exercise or temperance.

AMERICAN TROPHIES.

The banners of the principal victories of the revolution, and the late war, are still in the military bureau of the war department, at Washington. Those taken at the Cowpens, Saratoga, and York, are among the most interesting. On the reduction of the army, the flags of the regiments distinguished in the last war, were collected and deposited in the same place.

The ensigns, under which Jessup and Scott, and their brave comrades, fought and conquered, are literally riddled by the shot of the enemy.

A flag, with the American eagle, elegantly worked in silk, presented to Pike, by the ladies of Philadelphia, and a British bunting, about twenty-five yards long, torn from its staff by a sergeant, at the capture of Fort George, are also among these trophies.

PHILOSOPHICAL MISCELLANIES.

Curious Spring.—In Oahu, one of the Sandwich Islands, are a number of wells, in which the water is perfectly free from salt, though it invariably rises and falls with the tides of the ocean. They are from one hundred yards to three quarters of a mile distant from the sea. This water is uniformly found on penetrating a number of feet into a stratum of porous calcareous rock which underlies the soil. It is difficult to account for its freshness, unless, as is suggested by Ellis, who furnished the statement, it is deprived of its salt by filtering through the rock.

Heat produced by Friction.—Sir Humphrey Davy proved that two pieces of ice rubbed together in an atmosphere at thirty-two degrees, or at the freezing point, are converted into water. A piece of ordnance is heated much sooner by constant discharges, than if filled with burning coals for ten times as long a period. These facts are adduced, among others, by the advocates of the immateriality of heat and light, to support their theory, which attributes heat and light to vibratory motions among the particles of bodies, and in a supposed ethereal medium.

Powerful Current of Air in Teneriffe.—It is stated in Ure's Geology, that on the top of the Peak of Teneriffe, the wind blows for the most part so strongly from southwest, that a person finds difficulty in standing upright against it. This current which is supposed to be constantly flowing from the tropicks toward the poles in the elevated regionsof the air, is caused by the rarefaction of the atmosphere on the earth's surface by the sun. The rarefied air of course rises, and then flows over on either side. From a south, it becomes a south-westerly current, in consequence of the diminishing velocity of those portions of the earth, over which it passes, the wind retaining the momentum which it had acquired at the equator, in moving with the earth's surface in an easterly course.

Meteorological Stone.—A Finland journal gives an account of a singular stone in the north of Finland, which answers the purpose of a publick barometer. On the approach of rain, this stone assumes a black or dark gray colour; and when the weather is inclined to be fair, it is covered all over with white specks. This stone is, in all probability, an argillaceous rock, containing a portion of rock salt, ammonia or salt-petre, and absorbing more or less humidity, in proportion as the atmosphere is more or less charged with it. In the latter case, the saline particles, becoming crystallized, are visible to the eye as white specks.

Hydrographick Paper.—M. Chevallier has examined a paper lately invented, which may be written on with a pen dipped in pure water. He found it was prepared by soaking the sheets of paper in a solution of sulphate of iron, drying them, and then covering them with finely powdered galls. He states that similar papers may be prepared by using other solutions and powders; thus blue is probably prepared by powdering the paper, soaked in sulphate of iron, with ferrocynate of potash.

EULENSTEIN.

We are about to record an instance of the victory of genius and perseverence over difficulties, more curious, perhaps, if not more interesting, than any which has yet appeared in our columns. It is the case of a young musician who was tyrannically driven into another line deprived of his instrument. the violin, and prohibited all indulgence of his favourite pursuit, and who yet found an instrument for himself, one all but tuneless, in other hands, and, by stealth, acquired the power of producing on that instrument a musick of such excellence, science, taste, and beauty, that princes and nobles came to be his patrons, and connoisseurs and crowds to listen to him with wonder and applause, wherever he presented himself. We allude to Mr. Eulenstein, the celebrated player on the Jew's harp.

Mr. Eulenstein is by birth a German, and was born at Heilbronn, in Wirtemberg, in the year 1802. A turn for musick, amounting to a passion, was soon manifested by him. He was early possessed of a violin, which he learned as a child to play, and often went without his breakfast, when a schoolboy, to save his pence to purchase strings. Judges of musical genius would have encouraged such a boy, but such his parents were not. *They* saw in his pursuit only idleness and poverty—the lot of all, except a few, in a country where almost all are musical. They locked up his violin, forbade him even to whistle, and succeeded in finding out for him a master and mistress, in the hardware line, with as little musick in their souls as in their saucepans. The youth's vicious tendency to musick was narrowly watched, and all pipes, fiddles, sackbuts, and other instruments, were warned off the premises.

Yet, on the premises, and in the stock in trade of these cast-iron personages, there was a musical instrument, which was destined to mar all their care of the anti-musical education of their charge—and that was the Jew's harp.[*] Young Eulenstein could not but indulge in a trial on this rude toy, as he opened the grosses to supply the school boys; but it was not till a gentleman happened to play it in a superiour manner in his hearing, that he saw its pretensions to be deemed a musical instrument. The Jews harp was now zealously practised by Eulenstein, and, to avoid detection, it was practised in bed, even under the clothes which covered him. The patience and perseverence of the young artist were almost unexampled.

A singular accident opened up to him an entire new view of the capabilities of the Jews harp. Falling asleep one night, in the course of his practice, with the instrument in his mouth, the tongue of the harp scratched his face, which induced him in the morning to cover the sharp point with a knob of sealing wax. This put his harp *out of tune*, but, by doing so, showed him that it might be likewise put *in tune*; in other words, varied in its tones—so that, by playing upon several harps in succession, differently tuned, he could command the chromatick scale. The discovery and the inference were, for a mere boy, alike wonderful; and his skilful and really scientifick use of both was not less so. He could now, by changing his harps, tuned to certain notes, modulate from one key to another; and, in another year, acquired a command of this mode of change, so rapid as not in the least to interrupt the melody of even quick passages.

He next attempted the staccato movement, which threatened to defy him; for, to produce it, he was obliged to stop with his tongue each vibration the instant after producing it, and then to draw back the tongue, in order to strike the next note. Even this formidable difficulty he overcame before the end of the third year, and performed the staccato as rapidly as he does now, in his "Rondo a la Paganini."

Our artist, who was at this time eighteen, resolved to follow musick as a profession, and to found his claim to publick favour upon his conquest of the Jews harp, a field where he did not expect a single rival. Another year's practice gave him the beautiful shakes, turns. and slides, so much admired in his "Kathleen O'More." In this year he gained some other points, such as double notes, roulades. chords and arpeggios. He had long played two harps at a time, tuned to harmony, which he changed out of fifteen or twenty lying before him.

Our harper now resolved to let out the secret of his acquirements to some friends; and performing in the dark, required them to name the instrument. None of them could, but delighted with the extraordinary musick, they compared it to the Eolian harp, called it the musick of fairies, angels, &c. Candles were brought, and a number of penny Jews harps discovered!

His master about this time died; and his situation becoming intolerable under the sole residuary power of the widow—who waxed yet more wroth with musick, obtained in defiance of all her anti-musical care—he deserted her service; and, with his mother's consent, a few shillings in his pocket, and, like the Last Minstrel,

> "His *harp* the sole companion of his way."

left his native place, and launched into the wide world.

When he visited any town, his instrument was so utterly scorned, that the very innkeepers thought him insane when he talked of giving a publick concert with a penny Jews harp; the magistrates turned him out when he asked permission to exhibit; and a room was repeatedly refused him. At Stuttgard, young Eulenstein met with some success, and there was an epoch in his fortunes—a summons to perform before the Queen of Wirtemberg, late Princess Royal of England, who applauded his musick, advised him to go to Paris and London, and gave him a letter to the Princess Augusta. To reach the French and British capitals seemed to our humble pedestrian an enterprise above his strength and means; but advised by a queen, and urged by his friends, he slung on his knapsack, and traversing the Black Forest, arrived in Switzerland, where he met with much encouragement, and remained five months. At Lusanne he spent five months more, acquired the French language, the theory of musick, and the guitar; and in November, 1826, after a solitary journey on foot, with £5 in his pocket, but full of hope, he entered the gates of Paris. For some time he was unknown and neglected; his money was exhausted, and his prospects sufficiently blank, when Mr. Stockhaussen befriended him, saw his singular merits, and speedily brought him into notice. Sir Sidney Smith also supported him with his patronage, and gave him letters for London. In Paris he performed at private parties, was called to play before the King, Charles the Tenth, the Duchess de Berri, the Duke of Orleans, the present king and other persons of rank; and, after giving a publick concert, came to London, passing rich, with £60 his own!—*Edin. Journal.*

THE ALLIGATOR PIKE.

Extract of a letter from a correspondent of the Sporting Magazine, dated Manchester, (Miss.) August 3, 1834:—I was endeavouring to basket a few bass from the now clear waters of the Yazoo. The sport was good when I commenced, but I was not allowed to enjoy it long; an enormous gar made his appearance where I was fishing, and in an instant all was quiet. The gar, or as this species is called, the Alligator gar, of our rivers answers to the shark of the ocean, and, indeed, they are very like the shark in their habits, which, to say the least of them, are very bad.—He is as formidable as the shark: armed with triple rows of teeth, he preys indiscriminately on the whole finny tribe. And, indeed, every thing of a fleshly nature that is dropped in the river, finds its way into his jaws. This fellow, after he had spoiled my sport, to give me an idea of his importance, cavorted awhile on the surface of the stream, now floating listlessly along, and now throwing himself half out of water; showing himself terrible even in sport: and in perfect wantonness took the cork of my fishing tackle between his jaws, and snapped the line as if it had been a single hair!—thus adding insult to injury. I instantly resolved on his destruction; and accordingly returned home, provided myself with three large hooks, the wire of which was about the size of an ordinary goose-quill; these I attached to the end of a small bed cord or clothes line, back to back, fixing them firmly first with twine, and then with wire, wrapping the wire for some distance above the hooks. Thus accoutred, I again repaired to the river, taking with me the entrails of a newly killed pig, which I wound about the hooks as a bait for his majesty, and as this was

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[*] *Jew's harp* is supposed to be a corruption of *jaw's harp*, or the harp for the mouth. The Germans call it *mouth trump;* the Scotch, *trump*. The Jews disclaim it as an instrument with which they have ever had a connexion.

"A dainty dish to set before the king,"

it was instantly seized and swallowed. I soon found, from the surges he made, that the monster had become firmly fixed to my line, and as he became aware of his situation, his efforts were redoubled, and his floundering and '*splurging*'

"Made the deep to boil like a pot."

I was aware of the power I would have to contend with, and had planted myself in such a position, that it would have been impossible for fish power to have dislodged me. His efforts to escape, though vigorous and powerful, were of short duration: after struggling about two minutes without success he yielded himself a willing sacrifice, and I drew him on shore without further difficulty. He measured just eight feet two inches in length, and weighed one hundred and fourteen pounds.—He has no scales, but his body is laid off into regular squares or diamonds, by indented lines twisting round his body, intersected by others running directly from his head to his tail.—He has no dorsal fin—his head is covered with an almost impenetrable prickly shagreen, and his mouth is garnished with six rows of sharp teeth in each jaw, i. e. three on either side of his tongue, which is long and forked. I regret that I did not open this fellow, as I have no doubt that I would have found some curiosities in his interminable maw."

USEFUL DEFINITIONS.

Aromaticks. The aromaticks are fragrant spices used for perfuming, spicing and stimulating. Those in general use are cinnamon, nutmeg, cloves, orange and lemon peel, pepper, peppermint, spearmint, ginger, cardomon, anise, caraway, coriander, and dill and cumin seeds. To the aromatick, as stimulants may be added mustard seed, euphorbium, fox-glove and ergotor spur.

*Cathartick*s. Catharticks are those medicines which possess a purging quality. They are rhubarb, jalap, pulp of cassia, bitter apple, aloes, senna, henbane, fox-glove, and oil of croton seeds, and castor seeds, &c.

Demulcents. Demulcents are soothing, softening or mollifying medicines; as decoctions of marsh-mallow root, sarsaparilla, barley-water, oatmeal and grit gruel.

Sudorificks. These are used as medicines to produce or promote sweat or perspiration. Guaiack gum, contrayerva root, and ipecacuanha are used.

Vegetable Diureticks are squills, fox-glove, dandelion, wild carrot seeds, parsely root, buchu leaves, &c.

Senatives. These are medicines which induce sleep. They are opium, nightshade, lettuces, poppy head, colchicum, henbane, hemlock, stramonium and tobacco.

Tonicks. These are medicines employed to give strength and elasticity to the system; or in other words to strengthen the tone of the system. They are peruvian and cascarilla bark, chamomile flowers, &c.

Licorice is the extract of the juice of a root cultivated at Pontefract, where it is made into pectoral cakes, and also in Spain and the Levant, and made into cakes, much used by brewers and in pharmacy.

Gall nuts are protuberances on trees created by the punctures of insects, and gallick acid is made from those on the oak.

Myrrh is a gum resin brought from the Levant and India.

Gum is pure mucilage, and the juices which when matured are sweet, oily, and farinaceous, were originally mucilaginous.

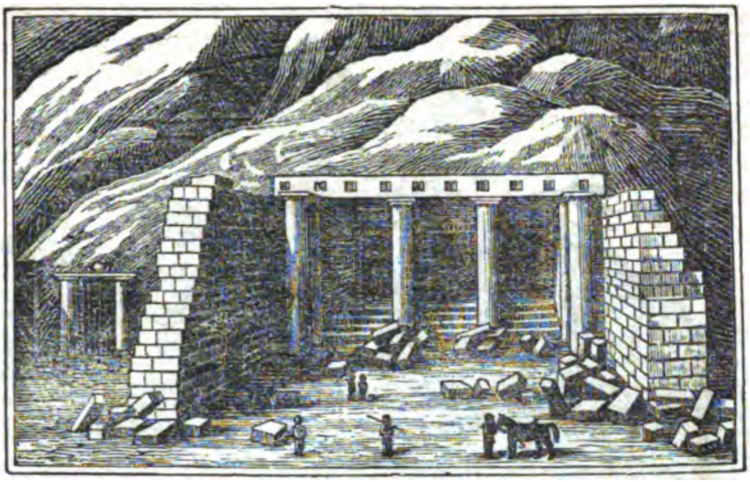
Mouldiness is a minute vegetation of perfect plants, flowers, &c. of the ferugi genus. Dry rot is a variety of mouldiness.

Chocolate is the solid oil of the cocoa nut.

The Cinnamon tree is a species of laurel, and is a native of Ceylon. It grows to 20 or 30 feet, and its trunk and branches produce the bark.

Cork. Cork is the bark of a kind of oak, (*guercus super*) which flourishes in Spain and the south of Europe, and in northern Asia. It falls from the tree at 12 or 15 years old; but for commerce they are stript for several years successively and then allowed an interval of 2 or 3 years. The young trees are stripped only every third year. When stripped from the tree it is piled up in a ditch or pond and heavy weights are placed upon it, which flattens it—it is then dried over fires for use. The specifick gravity of cork, is 240, or ¼ that of water. It is a bad conductor of heat, and is used to increase the warmth of apartments, and as the lightest and most elastick of the woods no substance is more generally useful. Its elasticity renders it useful for stoppers to bottles and other vessels, and its lightness renders it valuable upon water; it is employed in the construction of life-boats, as the floats of fishermen and as buoys. The Spaniards manufacture lamp-black of it.

Indian Rubber. Gum Elastick or Indian Rubber is the concreted juice of a tree which grows in South America. It is procured by making an incision in the bark of the tree in wet weather, whereupon a milky juice oozes out, which is spread over moulds of clay; when this is dry, a second layer of the liquid is spread over it; this operation is repeated till the layer is of the required thickness. After this it is placed over the smoke of burning vegetables, which hardens and blackens it. The Indians convert it into bottles, boots, and flambeaux. With us it has been brought into a great variety of uses. It is manufactured into waterproof hats, caps, clothes, boots and shoes, and suspenders; into surgical and chymical instruments and children's toys; and it is used in varnish and other chymical preparations, and upon the bottoms of vessels, &c.



ANCIENT TEMPLE OF SEKKET.

The town of Sekket, to the north of which the above temple is situated, is an ancient town in Egypt, erected on the slope of two opposite mountains. A wide road, which at times becomes the channel to a torrent, separates it in the middle. The ancient ruins cover a space of about a quarter of a league in length; as to the style of the modern houses they are well built, though of rough stone, and talc, of the same nature as the mountain.—Very few are found with one story; the windows and doors are very small, numbers of them stand detached, and are banked or embanked against the mountain.—The roofs of the building have been destroyed. The town was doubtless designed for the workmen in the Emerald mines, which lie not far from this town, and which the ancient Egyptians used to work.

A little to the north of this town, are two temples cut out of the solid rock of the mountain. The rocks which compose the mountain consist principally of talc, which is a kind of soft rock, having a shining appearance. This engraving is a representation of the largest of these temples, which has four exteriour columns and two others on the frontispiece that decorate the entrance. To arrive at the interiour we first ascend a staircase, and farther on are three steps to penetrate into the sanctuary; at the side are two little saloons, one of which contains an isolated altar in the middle. In the sanctuary is another large altar. Outside of the temple to the right and left, are two little sanctuaries in front of the whole building. In the engraving there is only one of them to be seen. At the entrance are two columns, the cornice over it is ornamented with a globe and two serpents. The subject is Egyptian, but the sepulchre is evidently Grecian. In the temple is seen a Greek inscription traced in red characters on the wall.

THE FRENCH CHAMBER OF DEPUTIES.

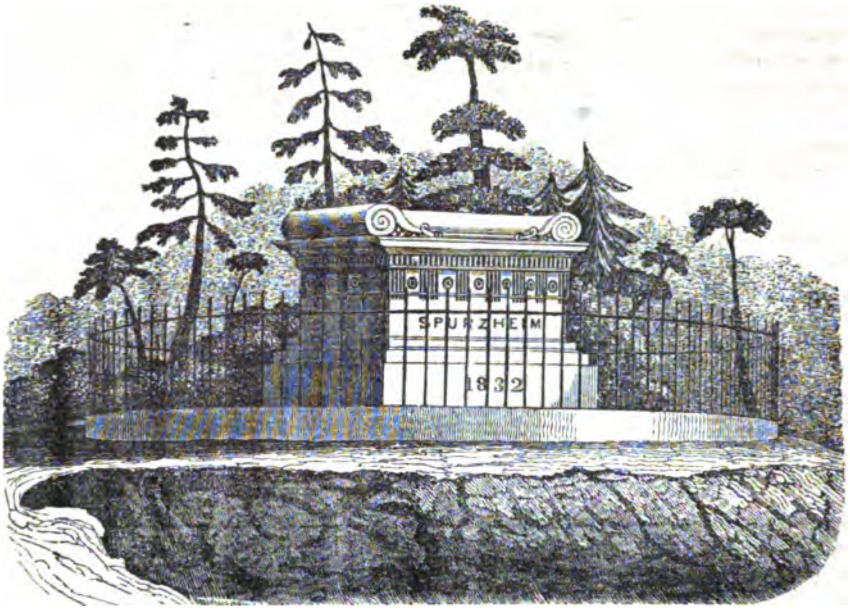
The Chamber of Deputies was originally a part of the Palace d'Elysee Bourbon, subsequently it was called the Palais du Corps Legislatif. But it has undergone many and frequent alterations, and is now, as well in exteriour as interiour, a splendid modern edifice. The front towards the bridge Louis XVI, consists of twelve massive Corinthian pillars, surmounted by a pediment; in the pediment is a *bas relief* representing Law seated on the charter, supported by Strength and Justice, on her left Peace is conducting Commerce. Behind this group the rivers Seine and Marne are mingling their waters, and Abundance advances, followed by the Arts and Sciences. The ascent is adorned with colossal statues of Minerva and Themis; on the summit are statues of Sully, Colbert, and D. Aguesseau. There are in the palace two large courts, and numerous apartments for the sitting of Committees, Libraries, publick records, and other purposes. In one of these apartments is a statue in marble of Louis Philippe, in the attitude of taking the oath to support the charter adopted by the Legislature. The decorations of all the apartments are splendid, and of modern taste, and indicate a great devotion to the principles of liberal government. The Hall of the Chamber of Deputies is a spacious room, lighted from the dome. On one side is very sumptuously fitted up the Chair of the President, which is sunk within a curved recess. This part of the Chamber is decorated with appropriate statues. In front of the President's chair are the clerks' desks, and in advance of these is the Tribune, from which the members address the house. The seats of the members are chairs, with small desks, permanently attached to the floor, and arranged in concentrick segments of a circle; the seats in rear being elevated higher than those in front. On the side of the room opposite the President's chair, is a spacious gallery for spectators. The ministers, when in attendance, have a bench immediately in front of the Tribune. The whole aspect of the room, the drapery of which is crimson, is magnificent, rather than imposing.

W. H. Seward.

FACIAL ANGLE.

The facial angle has been used by philosophers of the old school, by which to denote the relative amount of intellect possessed by different individuals, as well as different species of animals. It is, however, rejected by phrenologists. It is the angle made by two lines, one of which is drawn from the bottom of the nose to the orifice of the ear—the other from the level of the upper jaw to the upper part of the forehead. It is found by observation that it is—

In Europeans,	75° to 85
American Indians,	73
Africans,	70
Oran-Otangs,	65
Monkeys,	57
Dogs,	40
Horses,	23



THE TOMB OF SPURZHEIM, AT MOUNT AUBURN, MS.

Among the many beautiful tombs and monuments that ornament the consecrated grounds of Mount Auburn, there is none in better taste, and none around which visiters gather with more interest and melancholy, than the mausoleum erected over the remains of the lamented Spurzheim, the distinguished Phrenologist. It is situated on an eminence, surrounded and overshadowed by trees, and nearly in front and but a short distance from the lofty Egyptian gateway. It is a plain but classick model, as the engraving illustrates, and made of polished Italian marble slightly clouded, and enclosed by an oval iron railing. Its prototype is Scipio's tomb, at Rome. It is upon the main avenue, and so conspicuous, that none can visit the cemetery without observing it. It bears no biographical eulogium, nor long and fulsome epitaph, but on either side the simple inscription,

SPURZHEIM.
1832.

And who will not "know *his* sepulchre?"

It may be gratifying to some of our readers to learn more of Mount Auburn. The Cemetery of Mount Auburn is a most interesting and beautiful enclosure of upwards of one hundred acres, situated in Cambridge and Watertown, Massachusetts, about four miles from the city of Boston. It was originally purchased by the Massachusetts Horticultural Society, and a portion of the land is now cultivated as the Experimental Garden of that society. This tract however, is separated from the woodland portion by a small water course. The woodland or inner portion, is especially devoted to the purposes of interment, and is covered throughout by a fine growth of forest trees, comprising an unusual variety of species. The ground is undulating, and variegated with hills, small plains, steep acclivities and deep valleys. The woods are hewn away, in various spots for the purposes of sepulture, and to open the many avenues, that wind among and around the hills and along the little pools. These avenues all of which bear the names of some tree or shrub, intersecting each other in every direction, leading to every part of the grounds, and in a spiral manner to the top of every eminence—and where the ground is level, opening to a width convenient for carriages, are peculiarly adapted to the inequalities of the tract, and afford to those who love such a holy and secluded spot, the most interesting retreats and delightful walks. The margins of the pools are beset with sweet flowers and shrubs. Here you will see a splendid mausoleum, of the finest and purest marble, of the most costly Italian workmanship and of various devices, mounted upon a conspicuous eminence; on yonder hill-side is a gothick tomb of strong pillars and massive door of the sombre granite—there in a secluded spot, thickly overshadowed, is an humble green plot, and the primrose bends its head upon its little neat border, and nothing but a chain surrounds it. The devices and models of monuments, from the tall and beautiful obelisk and pillar to the humble slab, marking the reposing places of the dead on every side, are as various as the tastes of their proprietors. The principal eminence called Mount Auburn, is one hundred and twenty-five feet above the level of Charles river, and commands one of the most beautiful prospects we ever beheld. The city of Boston, the towns of Charlestown and Roxbury, the distant ocean, the winding Charles river, the cultivated fields on every side, the blue hills of Milton in the distance, the venerable pile of Harvard University, the heights of Watertown on one side, and the Fresh Pond on the north, constitute a landscape of surpassing beauty. It is contemplated erecting a tower upon this eminence, which, while it will serve as a guide to the place, will extend and perfect one of the most splendid views in the United States.

The following extract from an address of Judge Story delivered on the consecration of the cemetery may be here appropriately introduced.

'A rural Cemetery seems to combine in itself all the advantages, which can be proposed to gratify human feelings, or tranquillize human fears; to secure the best religious influences, and to cherish all those associations, which cast a cheerful light over the darkness of the grave.

'And what spot can be more appropriate than this for such a purpose? Nature seems to point it out with significant energy, as the favourite retirement for the dead. There are around us all the varied features of her beauty and grandeur—the forest-crowned height; the abrupt acclivity; the sheltered valley; the deep glen; the grassy glade, and the silent grove. Here are the lofty oak, the beech, that "wreathes its old fantastick roots so high," the rustling pine, and the drooping willow;—the tree, that sheds its pale leaves with every autumn, a fit emblem of our own transitory bloom; and the evergreen, with its perennial shoots, instructing us, that "the wintry blast of death kills not the buds of virtue." Here is the thick shrubbery, to protect and conceal the new-made grave; and there is the wild-flower creeping along the narrow path, and planting its seeds in the upturned earth. All around us there breathes a solemn calm, as if we were in the bosom of a wilderness, broken only by the breeze as it murmurs through the tops of the forest, or by the notes of the warbler pouring forth his matin or his evening song.

'Ascend but a few steps, and what a change of scenery to surprise and delight us. We seem, as it were, in an instant, to pass from the confines of death to the bright and balmy regions of life. Below us flows the winding Charles, with its rippling current, like the stream of time hastening to the ocean of eternity. In the distance, the City,—at once the object of our admiration and our love,—rears its proud eminences, its glittering spires, its lofty towers, its graceful mansions, its curling smoke, its crowded haunts of business and pleasure, which speak to the eye, and yet leave a noiseless loneliness on the ear. Again we turn, and the walls of our venerable University rise before us, with many a recollection of happy days passed there in the interchange of study and friendship, and many a grateful thought of the affluence of its learning, which has adorned and nourished the literature of our country. Again we turn, and the cultivated farm, the neat cottage, the village church, the sparkling lake, the rich valley, and the distant hills, are before us through opening vistas; and we breathe amidst the fresh and varied labours of man.

'There is, therefore, within our reach, every variety of natural and artificial scenery, which is fitted to awaken emotions of the highest and most affecting character. We stand, as it were, upon the borders of two worlds; and as the mood of our minds may be, we may gather lessons of profound wisdom by contrasting the one with the other, or indulge in the dreams of hope and ambition, or solace our hearts by melancholy meditations.

'Who is there that in the contemplation of such a scene, is not ready to exclaim, with the enthusiasm of the Poet,

"Mine be the breezy hill, that skirts the down,
  Where a green, grassy turf is all I crave,
With here and there a violet bestrown,
  Fast by a brook, or fountain's murmuring wave,
  And many an evening sun shine sweetly on my grave!"

'And we are met here to consecrate this spot, by these solemn ceremonies, to such a purpose. The Legislature of this Commonwealth, with a parental foresight, has clothed the Horticultural Society with authority (if I may use its own language) to make a perpetual dedication of it, as a Rural Cemetery or Burying-Ground, and to plant and embellish it with shrubbery, and flowers, and trees, and walks, and other rural ornaments. And I stand here, by the order and in behalf of this Society, to declare that, by these services, it is to be deemed henceforth and for ever so dedicated. Mount Auburn, in the noblest sense, belongs no longer to the living, but to the dead. It is a sacred, it is an eternal trust. It is consecrated ground. May it remain for ever inviolate!'

'What a multitude of thoughts crowd upon the mind in the contemplation of such a scene. How much of the future, even in its far distant reaches, rises before us with all its persuasive realities. Take but one little narrow space of time, and how affecting are its associations! Within the flight of one half century, how many of the great, the good, and the wise will be gathered here! How many in the loveliness of infancy, the beauty of youth, the vigour of manhood, and the maturity of age, will lie down here, and dwell in the bosom of their mother earth! The rich and the poor, the gay and the wretched, the favourites of thousands, and the forsaken of the world, the stranger in his solitary grave, and the patriarch surrounded by the kindred of a long lineage!'

ARNOLD'S EXPEDITION INTO CANADA IN 1775.

Abridged for the Family Magazine, from Hawkins' Picture of Quebec.

The invasion of Canada by the troops of the American Congress rendered the year 1775 remarkable in the annals of the Province.

Canada, supposed to be perfectly secure, had been left almost destitute of regular troops, nearly all of which had been removed to Boston. The whole force of this description consisted of only two regiments of Infantry, the 7th Fusileers, and the 26th, amounting to no more than eight hundred men. Of these the greater part were in garrison at St. John's, the rest dispersed through the various posts.

On the 17th September, 1775, Brigadier General Richard Montgomery, who had formerly been in the British service, appeared at the head of an army, before the Fort of St. John's; which, after a gallant defence, surrendered on the 3d November, the garrison marching out with the honours of war. Montreal, which was entirely defenceless, capitulated on the 12th November, and General Carlton, conceiving it of the utmost importance to reach Quebec, the only place capable of defence, passed through the American force stationed at Sorel, during the night, in a canoe with muffled paddles, and arrived in Quebec on the 19th, to the great joy of the garrison and loyal inhabitants, who placed every confidence in his well-known courage and ability.

While the province was thus threatened with subjugation on the side of Montreal, a new danger presented itself from a quarter so entirely unexpected, that until the particulars were ascertained, the fears and superstitions of the inhabitants of the country parishes had ample subject of employment and exaggeration. An expedition of a singular and daring character had been successfully prosecuted against Quebec from the New England States, by a route which was little known and generally considered impracticable. This expedition was headed by Colonel Arnold, an officer in the service of the Congress; who with two regiments, amounting to about eleven hundred men, left Boston about the middle of September, and undertook to penetrate through the wilderness to Point Levi, by the means of the rivers Kennebec and Chaudiere.

The spirit of enterprise evinced in this bold design and the patience, hardihood, and perseverance of the new-raised forces employed in the execution, will for ever distinguish this expedition in the history of offensive operations. A handful of men ascending the course of a rapid river, and conveying arms, ammunition, baggage and provisions through an almost trackless wild—bent upon a most uncertain purpose—can scarcely be considered, however, a regular operation of war. It was rather a desperate attempt, suited to the temper of the fearless men engaged in it, the character of the times, and of the scenes which were about to be acted on the American continent. The project, however, of Arnold was by no means an original thought. It had been suggested by Governour Pownall, in his "Idea of the service of America," as early as the year 1758. He says,—"The people of Massachusetts, in the counties of Hampshire, Worcester and York are the best wood-hunters in America....... I should think if about a hundred thorough wood-hunters properly officered, could be obtained in the county of York, a scout of such might make an attempt upon the settlements by way of Chaudiere river."

On the 22d September, Arnold embarked on the Kennebec river in two hundred batteaux, and notwithstanding all natural impediments—the ascent of a rapid stream—interrupted by frequent *portages* through thick woods and swamps—in spite of frequent accidents—the desertion of one third of the number—they at length arrived at the head of the river Chaudiere, having crossed the ridge of land which separates the waters falling into the St. Lawrence from those which run into the sea. They now reached Lake Megantic, and following the course of the Chaudiere river, their difficulties and privations, which had been so great as on one occasion to compel them to kill their dogs for sustenance were speedily at an end. After passing thirty-two days in the wilderness, they arrived on the 4th November at the first settlement, called *Sertigan*, twenty-five leagues from Quebec, where they obtained all kinds of provisions. On the 9th Colonel Arnold arrived at Point Levi, where he remained twenty-four hours before it was known at Quebec; and whence it was extremely fortunate that all the small craft and canoes had been removed by order of the officer commanding the garrison. On the 13th, late in the evening, they embarked in thirty-four canoes, and very early in the morning of the 14th, he succeeded in landing five-hundred men at Wolfe's Cove, without being discovered from the *Lizard* and *Hunter*, ships of war. The first operation was to take possession of what had been General Murray's house on the St. Foy road, and of the General Hospital. They also placed guards upon all the roads, in order to prevent the garrison from obtaining supplies from the country.

The small force of Arnold prevented any attempt being made towards the reduction of the fortress until after the arrival of Montgomery from Montreal, who took the command on the 1st December, and established his head quarters at Holland House. Arnold is said to have occupied the house near Scott's Bridge, lately inhabited by the Honourable Justice Kess.

The arrival of the Governour on the 19th November had infused the best spirit among the inhabitants of Quebec. On the first December, the motley garrison amounted to eighteen hundred men—all, however, full of zeal in the cause of their king and country, and well supplied with provisions for eight months. They were under the immediate command of Colonel Allan Maclean, of the 84th Regiment or Royal Emigrants, composed principally of those of the gallant Fraser's Highlanders, who had settled in Canada.

The bombardment of the town commenced and was continued with obstinacy and perseverance through December. With the issue of the siege our readers are mostly probably acquainted. It resulted in the repulse of the American troops, a partial surrender, and the death of the brave Montgomery. Arnold was wounded in the knee, and was carried disabled to the General Hospital. The Americans lost in the attack about one hundred killed and wounded, and six officers of Arnold's party. The British lost one officer, and seventeen killed and wounded. By the death of Montgomery the command devolved upon Arnold, who had received the rank of Brigadier General. Arnold continued the blockade, but without success, although he had received reinforcements, that swelled his army to about two thousand men. On the 5th of May the siege was raised, and the American troops retired to Montreal.

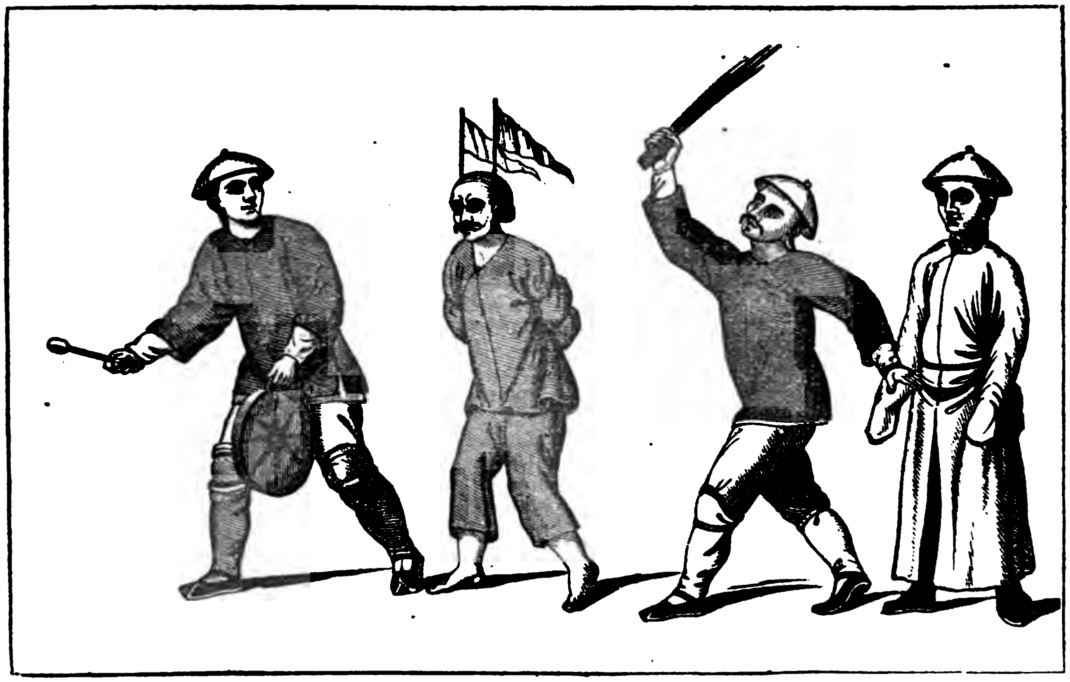
TOWN OF LOWELL, MASSACHUSETTS.

This extraordinary town, which has justly been called the Manchester of America, is situated upon the Merrimack river, about twenty-eight miles north of Boston. A very few years ago, and it was a mere hamlet of perhaps a dozen families. At about that spot there is to be sure a rapid in the Merrimack, but it was not dreamed that advantage could be taken of the waters of that broad river, until within a very few years since. The proximity to an excellent market, the plentiful supply of water, and the tolerable fertility of the adjacent country, were the original inducements to capitalists to attempt to apply the water from the river to manufacturing purposes, by means of a canal. Accordingly a canal was opened, receiving its supply of water from the river about half a mile above the village, and after a circuitous route of about a mile, emptying again into the river below. It was immediately perceived that the water power was immense. A factory was built—another and yet another sprung up, and Lowell began to present an alluring prospect to Boston capitalists. Large companies were formed, operatives flowed in, and dwelling-houses were constantly building for the reception of new families. Nor was the new business impulse all in one line. Factories were erected for various purposes and of different extent. They were chiefly for cotton; but there were also woollen factories, and carpet factories, print works, button factories, machine shops, and amongst the rest, on a visit last fall, we observed a shop for planing boards by water power. A board eighteen inches broad, and thirty feet long was put into the machine. and it was sent through in *one minute*, and came out smoothly and beautifully planed. Brick stores and publick houses were erected and streets marked out with the regularity of a city. Every eligible spot upon the banks of the canal was occupied, and indeed new branches of the canal were dug for the accommodation of new manufacturing establishments.

Now, Lowell has about fifteen thousand inhabitants, and the brick walls, intersecting streets, the hum of business and the smoky atmosphere above, give it the appearance of a city. Its factories now produce 39,170,040 yards of cloth in a year, and consume 12,256,400 pounds of cotton, and an immense quantity of wool. They also consume 310,000 pounds of starch; 3,800 barrels of flour for making sizing, &c., and 500,000 bushels of charcoal. The number of yards of carpeting and other woollen goods, and the quantity of other stuffs is also extremely large. The average pay of girls is one dollar ninety cents per week, clear of board; men receive eighty cents per day, clear of their board. They are paid off once in four weeks, and the sum total of their wages amounts to $89,000 for each month. The medium produce of a loom on what is called No. 14 yarn, is 38 to 49 yards per day; No. 30, 25 to 30 yards; average per spindle, 1 1-10th yards per day. It is a singular spectacle to see the factory girls, when the bell rings at twelve o'clock for dinner, streaming from the factories in a seeming endless continuity of stream. We inquired how many girls were employed in the factories; we were answered, "*about three miles on 'em!*"

The health of the operatives is reputed to be good, and their moral condition and character excellent.

Stages with six horses run from Boston to Lowell in three hours. An excellent iron railway upon granite foundation is now, however, nearly completed the whole distance, which will bring the two places much nearer together. On leaving Lowell for Newburyport, we were surprised with the beauty of the prospect which presented itself as we ascended the hill on the eastern skirts of the village. The compact and busy brick town lay beneath us, the broad and shining Merrimack flowed on the north, distant villages were seen over the undulating country south and west, and the scenery on every side variegated and beautiful, together presented a scene, comprehended in one view, of extraordinary beauty and interest.



CHINESE PUNISHMENTS, No. 3.

A CULPRIT CONDUCTED TO TRIAL.

In taking the culprit before the tribunal he is preceded by a man, who strikes upon a gong, that he may aggravate the shame of the offender, by drawing upon him the notice of the publick. Two others follow after him on foot, one of whom is employed in keeping up the culprit's face by means of a bundle of cleft canes. His hands are tied behind his back, and to render him more conspicuous a little red banner is fastened upon each side of his head.

THE FRONTISPIECE.

In order that our readers may justly appreciate the design of our Frontispiece, we give below at length, the poem which suggested it.

A pathetick interest is awakened in the contemplation of this picture and poem. They remind us that the soil we tread upon was wrested from an injured Indian race, a race that the white man by accumulated wrongs and injuries has swept not only from their dominions but almost from existence. Where are those Indian parents pictured in the engraving, or their descendants now? Who has torn up the mouldering clay which that "green hillock" compassed? Does the poor Indian worship the god of thunders at his old burial places, and the Indian maiden strew beads and flowers as she was wont, over the graves of her fathers? Did not the Indian rightfully expect a peaceful life, or at least a natural death and a quiet grave? And has he found either? Alas, the Manitou otherwise dispensed it. And the zealous cupidity of the fast encroaching white man has overspread the fields of the Indian, hewn away his forests, destroyed his lodges, and sacrilegiously exhumated the remains of the departed of his race. You will find their bones bleaching in the ploughed field, and their arrow heads and beads and medals lying in the furrow, reminding us only of a race *that were.*

> "A noble race! but they are gone,
> With their old forests wide and deep,
> And we have built our homes upon
> Fields where their generations sleep."

Yes, yet a *few* of their descendants remain. They are but the fragments of the old tribes, scattered through the wilds of the west, or roaming upon the borders of the Pacifick, without any hold upon the past, but the memory of ten thousand burning wrongs,—and without any hope in the future, but an escape from the pursuing white man, and a final resting-place in the bosom of the Pacifick.

With inevitable extermination staring them in the face, a small band recently returned from their western wanderings, and have built their lodges upon a narrow strip of land, which they claim as their own, upon the banks of the Farmington river in Connecticut. There, disturbing none and desiring to be undisturbed they have chosen to breathe the short remnant of their days, with the consolation that they shall die and be buried in the land of their fathers.*

The subjoined verses by William C. Bryant, express the truth with inimitable beauty.

AN INDIAN AT THE BURYING-PLACE OF HIS FATHERS.

It is the spot I came to seek,—
  My father's ancient burial-place,
Ere from these vales, ashamed and weak,
  Withdrew our wasted race.
It is the spot,—I know it well—
Of which our old traditions tell.

For here the upland bank sends out
  A ridge toward the river side;
I know the shaggy hills about,
  The meadows smooth and wide;
The plains, that, toward the southern sky,
Fenced east and west by mountains lie.

A white man, gazing on the scene,
  Would say a lovely spot was here,
And praise the lawns so fresh and green
  Between the hills so sheer.
I like it not—I would the plain
Lay in its tall old groves again.

The sheep are on the slopes around,
  The cattle in the meadows feed,
And labourers turn the crumbling ground,
  Or drop the yellow seed,
And prancing steeds, in trappings gay,
Whirl the bright chariot o'er the way.

Methinks it were a nobler sight
  To see these vales in woods arrayed,
Their summits in the golden light,
  Their trunks in grateful shade,
And herds of deer, that bounding go
O'er rills and prostrate trees below.

And then to mark the lord of all,
  The forest hero, trained to wars,
Quivered and plumed, and lithe and tall,
  And seamed with glorious scars,
Walk forth, amid his reign, to dare
The wolf, and grapple with the bear.

This bank, in which the dead were laid,
  Was sacred when its soil was ours;
Hither the artless Indian maid
  Brought wreaths of beads and flowers,
And the gray chief and gifted seer
Worshipped the God of thunders here.

But now the wheat is green and high
  On clods that hid the warrior's breast,
And scattered in the furrows lie
  The weapons of his rest,
And there, in the loose sand is thrown
Of his large arm the mouldering bone.

Ah, little thought the strong and brave,
  Who bore their lifeless chieftain forth;
Or the young wife, that weeping gave
  Her first-born to the earth,
That the pale race, who waste us now,
Among their bones should guide the plough.

They waste us—aye—like April snow
  In the warm noon, we shrink away;
And fast they follow, as we go
  Towards the setting day,—
Till they shall fill the land, and we
Are driven into the western sea.

But I behold a fearful sign,
  To which the white men's eyes are blind;
Their race may vanish hence, like mine,
  And leave no trace behind,
Save ruins o'er the region spread,
And the white stones above the dead.

Before these fields were shorn and tilled,
  Full to the brim our rivers flowed;
The melody of waters filled
  The fresh and boundless wood;
And torrents dashed and rivulets played,
And fountains spouted in the shade.

Those grateful sounds are heard no more.
  The springs are silent in the sun,
The rivers, by the blackened shore,
  With lessening current run;
The realm our tribes are crushed to get
May be a barren desert yet.

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* There are about 80 men, women and children. 300 more it is rumoured are expected this Spring. It is supposed they are from Michigan.

INTELLIGENCE OF BIRDS.

A gentleman residing in Catskill, relates the following:

"A son of his, in the early part of the season, put up a cage in his garden intended for a blue bird. Soon after it was completed, a pair of wrens paid it a visit, and becoming pleased with the tenement, took possession and commenced building a nest. Before, however, the nest was completed a pair of blue birds arrived, laid claim to the cage, and after a hard battle succeeded in ousting the wrens, and forthwith completed the nest on a plan of their own. The male wren was a bird of spirit, and not disposed to submit tamely to the injury. Some days after, watching his opportunity when his antagonist was away, he entered the cage, and commenced rolling the eggs out of the nest. He had thrown out but one when the blue bird discovered him, and with loud cries made an immediate attack. The wren sought safety in a neighbouring currant bush, and by his activity in dodging about among the branches and ground, succeeded in eluding his enraged adversary. The blue bird gave up the chase and returned to examine the condition of his nest. The egg had luckily fallen on a soft bed, and had not broken. After a careful examination, he took it in his claws and returned it safely to the nest"

TO SUBSCRIBERS.

Our obligations to those subscribers who paid us in advance for the second volume, are herewith we believe discharged. They will please accept our grateful acknowledgements for their encouraging patronage. If their anticipations are not disappointed, we cannot resist taking the opportunity of inviting them respectfully to continue with us through another volume, the first part of which, enlarged and improved, shall be forthcoming on the first of June next. We shall endeavour to make the next volume pleasing and instructive, to the reading publick, creditable to ourselves, and not unworthy the cause of American Literature and of General Education. See PROSPECTUS.

☞ Subscribers residing in this City and in Brooklyn, will be waited upon at an early day to renew their subscriptions if they desire to do so.

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